Enhancing Illusionism within the Encased Contemporary Art Diorama through the Integration of Screen-Based Animated Film.

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Abstract

In the late nineteen eighties artists started to create a highly illusionistic type of small scaled diorama, which I refer to as the encased contemporary art diorama. Such dioramas are typically presented encased in a box-like structure with a glazed viewing window situated at the front. Artifice such as realistically coloured and shaped miniature forms, strategically positioned mirrors and quantified atmospheric lighting are used to enhance the verisimilitude of the mimetic resemblance to life-sized reality.

As a maker of animated films, I became curious about the ways in which illusionism within such dioramas might be enhanced through the integration of screen-based animated film. To pursue this line of enquiry, I first strove to understand how illusionism functions within encased contemporary art dioramas, and I travelled to Lyon, France to view an exhibition of such dioramas at the Musee Miniature et Cinema. As there is an apparent lack of text on how illusionism functions within such dioramas, I modelled my initial research on texts about illusionism in representational pictures, how artists create visual illusions and the role of the viewer in the formation and perception of illusions. I engaged the writing of Michael Fish to assist in identifying different illusion types.

To fully view the interior of an encased contemporary art diorama, the viewer must alter the location of their eyes in relation to the diorama and its contents, concurrently the encasement prevents any tactile appraisal of the diorama's contents. I refer to Maurice Merleau-Ponty's phenomenology of embodiment to account for the ways the viewer's embodiment can influence their perception of dioramic illusions.

The outcomes of my studio practice include animated films, and dioramas both with and without screen-based animated film integrated within them. The resulting illusions achieved are appraised and discussed, limitations are identified, and future potentials contemplated.

Statement of Authorship

Except where explicit reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma. No other person's work has been relied upon or used without due acknowledgement in the main text and bibliography of the thesis.

Signed:

Kenneth Kronberger
Dated: 19/12/2022

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I acknowledge the Wadawurrung and Dja Dja Wurrung People as the traditional owners of the lands and waters upon which this research was conducted. I pay my respect to their Elders past, present and emerging and extend this to all Aboriginal and Torres Strait Islander People.

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<center>**Introduction**</center>

> Like trompe l'oeil paintings, dioramas challenge our perceptual skills. They compel us to pour over their scenes, comparing their versions of reality to our own. This experience is uniquely visceral. Although almost always removed from us by their diminutive scale, extreme fragility, or physical barriers such as vitrines or observation windows, dioramas activate a physical response that flat images, isolated sculptures and even holography cannot. They engage our sense of depth perception and with it, a bodily awareness of space, which encourages us to make the imaginative leap into their constructs.[1]

<div align="right">Toby Kamps</div>

The Project

My practice led research is an exploration of illusionism within the encased contemporary art diorama and the possibility of enhancing such illusionism through the strategic integration of screen-based animated film.

Throughout the project I use the term 'encased contemporary art diorama' to identify a very particular type of diorama, a highly illusionistic one which emerged in contemporary visual art practices in France and the United States of America during the late 1980s. Such dioramas may be identified by the physical characteristics of the format in which they are presented, this typically involves the use of modelled miniature three-dimensional representational forms strategically arranged and illuminated within an opaque box-like encasement with a specified viewing portal. The usual practice is for the viewing portal to take the form of a transparent glass window situated at the front of the encasement, facing towards the viewer, however it may also take the less common form of a small unglazed opening or a tiny peephole.

Much of the appeal of the encased contemporary art diorama resides in its illusionistic capacities to convincingly emulate in miniature the spatial and visual qualities of the life-sized world. The subject matter of such dioramas is typically an actual or imagined place, realistically depicted in a scaled-down silent static three-dimensional form, presented as if frozen in a moment of time. Many of the places depicted in the encased contemporary art dioramas created by the artists discussed in this thesis are conspicuously ordinary in nature, they include a tiled bathroom, an untidy bedroom and a field with dandelions growing in it. The distinguishing quality that elevates the dioramic depictions of such everyday places from

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[1] Toby Kamps, *Small World: Dioramas in Contemporary Art*. (San Diego: Museum of Contemporary Art, 2000),6, exhibition catalogue.

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the ordinary to the extraordinary is the verisimilitude of their illusionary mimetic resemblance to actual life-sized places, a quality which as Kamps observes can "challenge our perceptual skills."[2] One of the key objectives of the artist is to persuade the viewer, via a combined use of assorted illusion forming artifices, that the three-dimensional scene depicted within the encased diorama is actual, even if just fleetingly in an evanescent moment of misperception.

As a creator of representational pictures in the form of paintings, drawings and monoprints, while also being a maker of animated films, I am familiar with the ways in which animated filmmaking processes can make static pictures appear to come to life by enriching them with audio accompanied illusions of movement and metamorphosis. It has led me to research if the illusionistic qualities of the encased contemporary art diorama, which like pictures is a static artform, can also be enhanced through the strategic integration of screen-based animated films.

In using the term 'screen-based animated film', I refer to animated film which is shown on a glass fronted screen, such as a television screen or computer monitor, as opposed to projection-based animation, which involves projecting animated film onto a surface.

The practice led component of my research has resulted in the creation of multiple animated films and more than twenty encased contemporary art dioramas, six of which have had animated film integrated into them.

Research Questions

The successful integration of animated films into the encased contemporary art diorama, can only occur once an understanding of how illusionism functions in such dioramas has been ascertained. It is this line of enquiry which has given rise to my two research questions.

1) How does illusionism function within the encased contemporary art diorama?

2) How can illusionism within the encased contemporary art diorama be enhanced through the integration of screen-based animated film?

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[2] Ibid., 6

Research Background

In developing a conceptual framework for my research I have been conscious of three essential requirements. The first requirement is appropriate accessible language for the identification and description of different types of illusions, for this I turn to the writing of William Fish, and in particular his book, *Perception, Hallucination and Illusions.*[3] According to Fish the "common thread that binds different cases of illusion together is that illusions occur when something is *seen* but seen in a way that it is not."[4]

The second requirement is theoretical discourse capable of accounting for the perception of illusions within the spatial confines of the encased contemporary art diorama, which unlike pictures and animated films is a three-dimensional artform. For this I draw on the writing of Maurice Merleau-Ponty, in particular his phenomenological concept of embodied perception, as expressed in his book *Phenomenology of Perception.*[5] Merleau-Ponty's text discusses fundamental ideas about the way we, as embodied beings, experience the everyday three-dimensional world from an embodied perspective.

The third requirement for the conceptual framework is appropriate language and theoretical paradigms befitting an analysis of illusionism within the context of visual art practice. Ernst Gombrich's pioneering 1959 book, *Art and Illusion: A Study in the Psychology of Pictorial Representation*[6], provides the foundations for ongoing discourse in the field, including the writing of Dominic Lopes[7], Michael Newall[8], and Richard Wollheim.[9] While much of the discourse is centred upon the formation and perception of illusions in representational pictures, the theories expressed in the various texts carry strong implications for understanding how illusionism functions within the encased contemporary art diorama.

As text specific to illusionism within animated film is also required, I draw on the writing of Professor Paul Wells of Loughborough University in England, and also that of Professor Maureen Furniss, a former lecturer at The University of Southern California.

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[3] William Fish, *Perception, Hallucination and Illusion* (New York: Oxford University Press, 2009)
[4] Ibid., 146.
[5] Maurice Merleau-Ponty, *Phenomenology of Perception* (London and New York: Routledge, 2012)
[6] Ernst Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation* (Oxford: Phaidon, 1977)
[7] Dominic Lopes, *Understanding Pictures*, (Oxford: Oxford University Press, 1996)
[8] Michael Newall, "Pictorial Experience and Seeing", *British Journal of Aesthetics*, 4, (2009): 2, accessed August 8, 2018 doi.org/10.1093/aesthj/ayp002
[9] Richard Wollheim, *Art and its Objects*, (Cambridge: Cambridge University Press, 1980)

Field Excursions

As part of my research I undertook several field excursions. I visited the *Australian War Memorial* in Canberra, to see the collection of large scaled illusionistic dioramas held there. I went to Lyon in France and visited the *Musee de Miniature et Cinema*, where I viewed a collection of encased contemporary art dioramas, including works by Dahn Ohlmann and Charles Matton. While in Lyon, I also visited *Musee Lumiere*, and viewed original artefacts associated with the early development of the moving filmic image. I went to Rome in Italy and visited the *Church of Sant Ignazio*, where I viewed large highly illusionistic late 17th century quadratura trompe l'oeil ceiling paintings created by Andrea Pozzo (1642-1709).

Potential Significance of the Research

Kamps' insightful reflection upon the multifaceted experience of viewing dioramas in general, is a rare example of discourse pertaining to the diorama within the context of contemporary art practice. It is an extract from a catalogue essay written for the exhibition, *Small Worlds: Dioramas in Contemporary Art,* which was held under his curatorship at the Museum of Contemporary Art, San Diego, California in the year 2000. In the same catalogue the gallery's director Hugh. M. Davies observed that the exhibition explores "a significant direction in art today: the use of dioramas- scale or full-size model environments- to consider actual and fictional situations."[10] The exhibition later proved to be the harbinger to several other twenty first century exhibitions featuring dioramas made by contemporary artists. These included *Otherworldly: Optical Delusions and Small Realities,* held in 2011 at the Museum of Art and Design, New York. *Diorama: Inventing Illusion* held in 2017 at the Schirn Kunsthalle in Frankfurt Germany, and *Espaces Interiers[11]* held in 2018 at Musee Miniature et Cinema, Lyon, France.

Despite there having been several exhibitions that included encased dioramas made by contemporary artists, there remains very little sustained text about how illusionism functions within such dioramas. There is an apparent dearth of books or academic articles on the topic, and most relevant text is only to be found within catalogue essays for exhibitions featuring contemporary art dioramas. However, catalogue essays tend to be descriptive rather than analytical, and have a limited capacity to fully explore individual artworks or fully express

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[10] Hugh M. Davies, "Forward" in *Small World: Dioramas in Contemporary Art*. (San Diego: Museum of Contemporary Art, 2000),4, exhibition catalogue.
[11] Interior Spaces. An exhibition featuring seventeen encased contemporary art dioramas by Charles Matton.

relevant theories. Furthermore, it is no more the role of a diorama exhibition catalogue essay writer to discuss and disclose the illusionistic techniques used by contemporary artist in creating their dioramas, than it is for the writer of a programme for a theatrical performance by magicians to discuss and disclose the techniques of their magic tricks.

My contribution to new knowledge will take the form of practical and theoretical insight into how illusions are formed and perceived within the encased contemporary art diorama. My research will provide an understanding of how the illusionistic capacity of the encased diorama may be extended to include durational illusions of movement, metamorphosis and sound attribution.

My research may result in outcomes that include information valuable to contemporary artists wishing to create encased contemporary art dioramas, or to include animated films within them. The findings of my research may also be of interest to makers of dioramas beyond the realms of contemporary art, for example makers of pedagogical dioramas designed for museological settings.

Chapter Outlines

Chapter One: Conceptual Framework

William Fish provides the appropriate vocabulary to describe and identify different types of illusions. Maurice Merleau-Ponty's phenomenological concept of embodied perception is discussed in relation to its capacity to account for the perception of illusions within the three-dimensional confines of the encased contemporary art diorama. Theories about illusionism within pictorial representation, first addressed in the writing of Ernst Gombrich, are discussed and their implications for illusionism within the encased contemporary art diorama considered. The topic of Illusionism within animated films is informed by the writing of animation experts Maureen Furniss and Paul Wells.

Chapter Two: Artist Made Animated Films: From Historical Origins to Contemporary Art Practice

I trace the historical origins of animated film. Attention is given to animated films created by visual artists, such as the modernists of the 1920s and 1930s. Animated films made by contemporary artists are discussed.

Chapter Three: The Encased Contemporary Art Diorama, and its Illusionistic Precursors

I identify four types of dioramas, Religious Dioramas, Entertainment Dioramas, Pedagogical Dioramas and Art Dioramas. Their potential influence on the encased contemporary art diorama is considered. Prior attempts to incorporate the live-action footage into encased contemporary art dioramas are identified.

Chapter Four: Materials and Methods

I discuss the materials and means by which I made my animated films, how I made the encased contemporary art dioramas, and imbued them with illusions. The means by which I attempt to integrate animated films into the encased contemporary art dioramas is documented and discussed.

Chapter Five: Findings

I refer to theoretical elements of the Conceptual Framework to discuss my understanding of how illusions are formed and perceived within the encased contemporary art diorama. The practical and theoretical significance of individual dioramic components are considered.

Chapter Six: Conclusion

I respond to the two key research questions and consider the future of the encased contemporary art diorama.

<center>**Chapter One**</center>

<center>**Conceptual Framework**</center>

1.1 Introduction to the Conceptual Framework

The conceptual framework for my research has been developed in response to three key requirements. Firstly, appropriate and accessible language for the discussion of the formation and perception of illusions, for this I turn to the writing of William Fish, professor of philosophy at Massey University, New Zealand. Secondly, a means to account for the perception of illusions within the three-dimensional confines of the encased contemporary art diorama. To address this need, I turn to the phenomenology of Maurice Merleau-Ponty and his writing on embodied perception. The third requirement is relevance to the formation and perception of illusions within the context of contemporary visual art practice. Ernst Gombrich and subsequent writers, discuss the formation and perception of illusions within representational pictures, and this in turn provides paradigms for the development of my own ideas pertaining to the formation and perception of illusions within the encased contemporary art diorama. In using the term 'representational pictures', I refer to two-dimensional pictures made by artists to depict visible aspects of the real world. Discourse on the topic of the formation and perception of illusions in animated film is resourced from the texts of animation experts Maureen Furniss and Paul Wells.

Illusions are an elusive topic to discuss, they are not material components of the actual world, and their occurrence only resides within the perception of those who behold them. I concur with Gombrich's observation that:

> Illusion we will find, is hard to describe or analyse, for though we may be intellectually aware of the given fact that any experience must be an illusion, we cannot, strictly speaking, watch ourselves having an illusion.[12]

An issue that I have encountered when reading on the topic of illusions from writers whose area of expertise is visual art, as opposed to the sciences of psychology and physiology, is an inconsistent use of language to describe and categorize different illusion types. I find that the writing of William Fish provides an accessible and appropriate means of describing and categorizing different illusion types within the context of philosophical discourse. Of particular interest is his book *Perception, Hallucination and Illusion*[13], in which he develops

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[12] Gombrich, *Art and Illusion*, 5.

[13] William Fish, *Perception, Hallucination and Illusion* (New York: Oxford University Press, 2009) kindle edition.

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a means of identifying different illusion types by situating them on a metaphorical scale that ranges from perfect veridical perception to total hallucination.

Like Merleau-Ponty, Fish's writing offers an account of the formation and perception of illusions in the everyday world. However, unlike Merleau-Ponty's embodied phenomenology, Fish's account of visual experience is not necessarily bound to an embodied viewpoint. Fish accounts for the perception of illusions by referring to "how things are in the external world."[14] His explanation of the formation of visual illusions incorporates natural physical phenomenon, for example the way altered lighting conditions can affect the perception of colour,[15] and the way the refraction of light can make a straight stick which is partially submerged in water appear to be bent.[16] According to Fish:

> We should note that many "illusions" are in fact situations with which we are familiar from everyday life. For example, simple objects such as tables and coins can look to be different shapes and colours when viewed from different angles and in different lighting conditions … such cases may be so mundane and well understood that one might balk at describing them as illusory at all.[17]

While Fish and Merleau-Ponty are concerned with the formation and perception of illusions in the everyday world, Gombrich and the writers who have subsequently explored his theories, specifically strive to account for the formation and perception of illusions in visual art practice, and in particular representational pictures.

1.2 William Fish: From Perfect Veridical Perception to Total Hallucination

In his book *Perception, Hallucination and Illusions,* William Fish develops a means of accounting for the interrelation of different illusion types by situating them on a metaphorical scale that ranges from perfect veridical perception at one pole, to total hallucination at the other. The metaphorical scale incorporates the three modes of perception relevant to the disjunctive theory of perception, these being veridical perception, illusion and hallucination.

At one extreme of the scale is perfect veridical perception,[18] in which we perceive things to be exactly as they are, at the other extreme is total hallucination,[19] a form of absolute non-veridical perception. According to Fish "illusion occupies the vaguely defined mid-ground

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[14] Ibid., 148.
[15] Ibid., 155.
[16] Ibid., 148.
[17] Ibid., 147.
[18] Ibid., 178.
[19] Ibid., 146.

between the two primary disjuncts or poles."[20] It should be noted that despite being placed on such a scale, the elusive nature of illusions persists, and consequently the boundaries between different types of illusions are not always clearly defined.[21] Fish notes that "There will be cases in which it is unclear into which category a particular case of illusion fits, indeed, whether a particular case qualifies as an illusion at all."[22] Accordingly, an illusion may also seem to fit within more than one category.

Nonetheless, withstanding the uncertainty arising from the enduring elusive nature of illusions, Fish's metaphorical scale does provide, as expressed by Fish, "a crude map of the territory we find ourselves in."[23]

As we move away from perfect veridical perception and take tiny incremental steps towards the opposing pole of pure hallucination, illusions come more and more into play. Fish describes a range of illusions within this scale, but these occupy no particular position upon the gradation between the two poles, they are simply categories of illusions which can be identified and unpacked from the broader category of illusions. In regard to illusions in general Fish writes:

> ...the common thread that binds different cases of illusions together is that illusions occur when something is *seen*, but seen in a way that it is not. In such cases, then, there is usually some particular feature of an object that is misperceived while at the same time other features of the same object are perceived accurately.[24]

Accordingly, while vagaries persist in the classification of illusions, Fish brings a greater degree of clarity to the definition of three main illusion types, these being, physical illusions, optical illusions and cognitive illusions.

1.3 Physical Illusions

The first category of illusions that Fish describes is "physical illusions", the initial example he provides is a straight stick appearing to be bent when it is partially submerged in water. He writes that "to explain why the stick in water appears bent, we need only appeal to the natural physical phenomenon of light being refracted as it passes through materials of different refractive indices."[25] Fish also refers back to the effect oblique angles can have upon

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[20] Ibid., 47.
[21] Ibid., 149.
[22] Ibid., 15.
[23] Ibid., 150.
[24] Ibid., 146.
[25] Ibid., 148.

perception, making circular items appear to be oval in shape, and the way altered light can impact upon perception. He writes:

> The reason that there is an illusory appearance in the case of physical illusions, then, is purely a matter of what is going on in the world and how that affects the patterns of light that impinge upon the subject. This is why physical illusions all have the interesting property of being able to be photographed.[26]

The wording "a matter of what is going on in the world" is directly transferable and applicable to the diorama, as it is "a matter of what is going on in the diorama", that creates illusions. Afterall, the contemporary art diorama is essentially a fictional microcosm in which through the implementation of illusion forming artifice, artists emulate perceivable qualities of the real world.

Fish states that physical illusions are intersubjective, signifying that they are beheld by all who view them.[27] For example, all people who view a mirror, will behold the mirror's illusionistic capacity to reflect images of objects placed before it. The same is true of the fundamental illusions of metamorphosis and movement seen in animated films, there are no accounts of fully sighted individuals not being able to perceive such illusions, and therefore they are intersubjective. The intersubjectivity of such illusions enables the viewing of animated films to be a shared collective experience with multiple audience members.

Intersubjectivity offers the dioramic artist a degree of certitude in implementing fixed physical arrangements that have a high probability of giving rise to the perception of Illusions. This degree of certainty is further enhanced by Fish's assertion that physical illusions are often highly predictable.[28] Such predictability propagates a repertoire of dependable physical illusion forming strategies that may be applied at will by dioramic artists.

1.4 Optical Illusions

As the name suggests, the term 'optical illusions' refers to deceptive visual appearances, in which things are seen, but not as they are. Fish refers to optical illusions as a special kind of illusion which is similar to physical illusions:

> Another class of illusions have a number of similarities to physical illusions as well as important differences. Within this group we find many of those cases that are constructed by artists or visual scientists and often go under the title of *optical* illusions. The key

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[26] Ibid., 148.
[27] Ibid., 147.
[28] Ibid., 147.

difference between physical and optical illusions, however, is that the occurrence of optical illusions cannot be *completely* accounted for by appeal to the way things in the world affect the patterns of light incident on the retina.[29]

A feature of optical illusions that sets them apart from physical illusions is their apparent dependence upon the fallibility of our perceptual capacities, and for this reason, they are of particular interest to the sciences of psychology and physiology. Optical illusions developed for scientific research have made their way into popular culture, for example The Müller-Lyer Illusion (Fig.1) in which two lines of the same length appear to be of different lengths. In the sciences the difference between that which is seen and that which is actually there, may be accounted for by numeric empirical evidence, for example, using a ruler to measure the lines in The Muller-Lyer Illusion.

In visual art practice, the account of the difference between the illusion and that which is actually before the viewer is not always so exact, and rarely measured in quantitative metrics. It is sufficient to state that one thing may appear to be located behind another, that an object such as a tree appears to be in the far distance, or to note that through the application of linear perspective drawing techniques, that a flat surface appears to contain a three-dimensional image.

Trompe l'oeil paintings present a special instance of optical illusion, which in many ways resemble the illusionistic capacities of the encased contemporary art diorama.

> *Trompe l'oeil* paintings are special *illusory* pictures whose *illusory* effect is characterized by the fact that, unlike in the ordinary cases of *usual* (that is, non-illusory) *picture perception*, the object looks, even momentarily, like a real and present object we can interact with.[30]

The term optical illusion is often used to convey the deceptive superficial visual appearance of things, however such misperceptions are often informed by the internal responses of those who perceive them, as is discussed in the next section, Cognitive Illusions.

1.5 Cognitive Illusions

Cognitive illusions are instigated by the perception of physical and optical illusions and may occur concurrently with these two illusion types. The term 'cognitive illusion' refers to our internalised responses to the illusions that we perceive. Their formation is influenced by factors including just how we interpret that which we perceive within the context of our

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[29] ibid., 148.

[30] Gabriele Ferretti, "Why Trompe L'oeils Deceive Our Visual Experience." *The Journal of Aesthetics and Art Criticism* 78, no. 1 (2020): 33-42. Accessed 13 May 2021 doi.org/10.1111/jaac.12688

personal knowledge, our beliefs, our assumptions, our life experiences and our expectations. As Fish states, "the contribution of the subject [viewer] is critical."[31]

According to Fish, "The central cases of cognitive illusion occur when we see something— a horse, a shadow, or a coil of rope, for example— and take it to be something it is not."[32] Fish's discussion on the topic is based upon a fictional scenario in which an individual sees a coil of rope beneath a log and mistakes it for a snake. He uses this scenario to highlight how different individuals bring their own beliefs to their perceptions. In Fish's scenario, a person with a fear of snakes may experience fear and repulsion as part of their illusionary experience, and not linger long enough to realise that they have misperceived a piece of rope as being a snake, while a snake wrangler may remain and soon be disillusioned of such a misperception.[33] Cognitive illusions are concept dependent.[34] "In order for a subject to have the capacity to mistake a coil of rope for a snake, that subject would need to possess the concept of a snake."[35] It is likely that the individual's concept of a snake would encompass the knowledge that snakes are known to reside beneath logs, and this in turn would serve to prime the perception of the illusion.

Cognitive illusions may simultaneously involve both veridical and non-veridical perception. For example, in Fish's snake scenario, the perception of the snake is non-veridical, while the perception of the log and the environment in which it is situated is veridical. As cognitive illusions are far less intersubjective than other illusion types, and as their perception is of a capricious nature,[36] artists who make encased contemporary art dioramas have far less control over the cognitive illusions experienced by those who view their dioramas, than they do over optical illusions and physical illusions perceived within their dioramas. As Fish states, "the things in the world need to be a certain way in order for our perceptual systems to be systematically misled."[37]

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[31] Fish, *Perception, Hallucination and Illusion*, 150.
[32] Ibid., 166.
[33] Ibid., 165.
[34] Ibid., 167.
[35] Ibid., 167.
[36] Ibid., 166.
[37] Ibid., 84.

1.6 Merleau-Ponty: The Phenomenology of Embodied Perception

The way in which we view the contents of encased contemporary art dioramas and perceive illusions within them is fundamentally different to the way we view representational pictures and animated films. The difference arises from the fact that pictures and animated films are two-dimensional in form, while the encased contemporary art diorama is three-dimensional.

When viewing animated films or wall mounted pictures we may remain more or less stationary and view them in their entirety. However, this is not the case in relation to viewing encased contemporary art dioramas, if their contents are to be viewed in their entirety, the viewer must move about and make bodily adjustments to resituate the location of their eyes.

Although we cannot physically enter encased contemporary art dioramas on account of their diminutive size and the presence of prohibiting features such as the frames and the glass of viewing portals, the ways in which we perceive the contents of such dioramas bears strong resemblances to the ways in which we perceive the actual life-sized world.

During the early phases of the development of my conceptual framework, I became aware of a need to account for the discrepancies between the way that two-dimensional artforms are perceived, as compared to the way in which three-dimensional artforms, such as the encased contemporary art diorama are perceived.

To address this need, I have turned to the French philosopher Maurice Merleau-Ponty and in particular his notion of embodied perception, an original concept which he introduced in his key text *Phenomenology of Perception*[38] and returned to in *The Visible and the Invisible*[39] and the posthumously published *The Primacy of Perception*[40]. In introducing concepts that recognize the role of the human body in the way we, as embodied beings perceive the world and the things in it, Merleau-Ponty broke away from Cartesian theories, that separated the mind from the body, and elided the role of the body in perception. Merleau-Ponty's account of embodied perception has been described as seeking "to unravel

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[38] Maurice Merleau-Ponty, *Phenomenology of Perception* (London and New York: Routledge, 2012)
[39] Maurice Merleau-Ponty, *The Visible and The Invisible* (Evanston: Northwestern University Press, 1968)
[40] Maurice Merleau-Ponty, *The Primacy of Perception* (Evanston: Northwestern University Press, 1964)

the phenomena given in perception in such a way as to reveal the role of bodily existence in giving meaning to the world we perceive, and therefore to all forms of consciousness."[41]

Merleau-Ponty writes that, "I regard my body, which is my point of view upon the world, as one of the objects of that world."[42] He also states "…any perception of a thing, a shape or a size as real, any perceptual constancy refers back to the positing and of a system of experience in which my body is inescapably linked with phenomena."[43]

Much of Merleau-Ponty's discussion is laid out in terms of visual perception, and this in turn gives way to a consideration of visual illusions, many of which are so prominent and recurrent in our day-to-day life that we may take them for granted. For example, when we view an object moving away from us, such as a car driving away on a long road, the further away it travels the smaller it appears to be. Our lived experience of the world informs us that the car has not actually shrunk in size. In another example of my own making, when a toddler first learns to walk across a room towards a chair, they are not only learning how to use their balance and their body mechanics, they are also learning to accommodate the visual illusion that as they approach the chair it appears to gradually increase in size. Merleau-Ponty writes of the way in which we perceive an image of a square set out on a flat surface, such as a table top, alters as we change our bodily relationship to it. When viewed obliquely the image of a square appears as a diamond shape. Merleau-Ponty brings to mind the fact that we are not only aware of the square, we are also aware of our bodily position in relation to the square, and this bodily awareness serves to explain and assist in resisting the illusion that the square has actually transformed into a diamond shape:

> 'The square viewed obliquely, as something roughly diamond-shaped is distinguished from a real diamond-shape only if we keep the orientation in mind.'[44]

1.7 Ernst Gombrich and Subsequent Writers

Much of the discussion of illusionism throughout the dissertation is initiated through the consideration of ideas originally proposed by Ernst Gombrich in his 1959 book *Art and Illusion: A Study in the Psychology of Pictorial Representation,*[45] a text which has been

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[41] Thomas Baldwin, *Maurice Merleau-Ponty: Basic Writing* (New York: Routledge, 2004), 13.
[42] Merleau-Ponty, *Phenomenology of Perception,* 70.
[43] Ibid., 304.
[44] Merleau-Ponty, *Phenomenology of Perception,* 300.
[45] Ernst Gombrich, *Art and Illusion*: *A Study in the Psychology of Pictorial Representation,* (Oxford, Phaidon, 1977)

described as 'a pioneering study of theoretical issues in pictorial representation',[46] and as a 'seminal' work which 'instigated philosophy's renewed interest in the phenomenon' of pictorial representation.[47] Gombrich writes:

> …just as a knock against the eye makes us see sparks and a strong glare an after image, so the experienced manipulator, whether conjurer, artist or scientist, has been able to find out how to predict and trigger non-veridical visual experiences through the arousal of visual sensations.[48]

While the writing of Fish and Merleau-Ponty addresses the formation and perception of illusion in the everyday world, their texts are not specific to the realm of visual art practice. For this reason, I turn to the texts of Ernst Gombrich, and subsequent writers who further explored his concepts, including Katerina Bantinaki,[49] Dominic Lopes,[50] Michael Newall,[51] and Richard Wollheim.[52]

In creating encased contemporary art dioramas, the artist attempts to lure the viewer into the belief that the fictional place depicted within the diorama is actual, to persuade them to suspend their disbelief. The degree to which the viewer of an encased contemporary art diorama experiences non-veridical perceptions may in part depend upon their willingness to 'suspend their disbelief', a term which has origins in English literature:

> This phrase, generally invoked to describe a norm organising how a reader/viewer relates to fictive media, such as film, literature or video-games, has latterly become only tenuously linked to Coleridge's original coinage of it in his Biographia Literaria (1817). Its usage now helps to explain our characteristic tendency to feel caught up in the events of a story while knowing them to be untrue: the mechanism functions by suspending this inclination to disbelieve.[53]

[46] Dominic Lopes, *Understanding Pictures* (Oxford: Oxford University Press, 1996), 8.

[47] Katerina Bantinaki, "Pictorial Perception as Illusion." *The British Journal of Aesthetics* 47, no. 3 (2007): 268, accessed May 13, 2020, doi.org/10.1093/aesthj/aym007

[48] Ernst Gombrich, *The Image and the Eye: Further Studies in the Psychology of Pictorial Representation* (Oxford: Phaidon, 1982), 180.

[49] Bantinaki, "Pictorial Perception as Illusion", 275.

[50] Dominic Lopes, *Understanding Pictures*, (Oxford: Oxford University Press 1996)

[51] Michael Newall, "Pictorial Experience and Seeing", *British Journal of Aesthetics*, 4, (2009): 2, accessed August 8, 2018 doi.org/10.1093/aesthj/ayp002

[52] Richard Wollheim, *Art and its Objects* (Cambridge; Cambridge University Press, 1980)

[53] Peter Garratt, "Moving Worlds: Fictionality and Illusion after Coleridge." *Literature Compass* 9, no. 11 (2012): 756, accessed July 6, 2020, doi.org/10.1111/j.1741-4113.2012.00908.x

[53] Gombrich, *Art and Illusion*, 246

1.8 The Beholder's Share

In *Art and Illusion* Gombrich not only discusses the fundamental role of the visual artist in the creation of representational pictures, but also the contributory role of the viewer in the perception of such representations. Gombrich refers to the contribution made by the viewer as being "the beholder's share."[54] In analogous terms, just as the potentialities of a closed book on a shelf remain latent until a reader engages with that book and brings meaning to the text within that book, so too it is with visual representations.

Gombrich describes the beholder's share in the reading of images as being the viewer's capacity to collaborate with the artist and in the example of a painting, "to transform a piece of coloured canvas into a likeness of the visible world".[55] The artist creates the material object, that being the actual work of art, which in turn serves as a catalyst for the viewer's personalised interpretation. Formation of the beholder's share is a symbiotic process, involving input from both the artist and the viewer, as Gombrich states "the mind of the beholder also has its share in the imitation."[56] However, the mind of the artist and mind of the beholder are not one and the same, and there may be many beholders, each forming a personalised interpretation of an artwork.

According to Gombrich "the distinction between what we really see and what we infer through the intellect is as old as human thought on perception,"[57] and that a viewer's expectations, their "mental set" plays a significant role in "deciphering the artist's cryptogram."[58]

Dominic Lopes, a professor of philosophy at the University of British Columbia, Canada, is the author of the significant book *Understanding Pictures.* He explains that "we come to pictures primed with beliefs, expectations, and attitudes about systems of representation."[59] Katerina Bantinaki, Assistant Professor of Philosophy at the University of Crete states that:

> Once we reach an interpretation driven by our mental set, we fail to acknowledge the indeterminacy of the picture—the fact that the pattern is consistent with more than one interpretation.[60]

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[54] Gombrich, *Art and Illusion*, 246.
[55] Ibid., 246.
[56] Ibid., 155.
[57] Ibid., 12.
[58] Ibid., 53.
[59] Lopes, *Understanding Pictures*, 33
[60] Bantinaki, "Pictorial Perception as Illusion", 275.

In psychoanalytical discourse emphasis shifts away from the material object of art and focuses increasingly upon the psyche of the viewer. For example, in Jacque Lacan's concept of "The Gaze", desire of various kinds infiltrates the perception of the vision,[61] including jealousy,[62] and sexualisation. Lacanian theory has been described as labyrinthian,[63] and while supplementary to the notion that the interpretation of an artwork is beyond control of the artist, further investigation on the topic is beyond the bounds of my research.

Systems and styles of representation may also serve as a major hindrance to the interpreting of a pictorial representation, and therefore obstruct the beholder's perception and appreciation of its potential illusionistic and representational qualities. According to Lopes:

> …pictures in unfamiliar systems can sometimes strike us as artificial, stylized, or even distorted. Such judgements are the result of trying to interpret a picture relative to the wrong system.[64]

Lopes supports this idea with examples of potentially obstructive styles and systems of representation, that can only be interpreted by those acquainted with their idiosyncratic qualities; for example, caricature, collage or cubism.[65] Gombrich's examples include ancient Greek art and the hieroglyphics of the ancient Egyptians.[66]

The concept of the beholder's share is equally applicable to the encased contemporary art diorama as it is to representational pictures. It is also relevant to animated films, as Maureen Furniss observes in relation to animated film "one's perception of colour also is culturally specific, no one interpretation is absolute."[67]

1.9 Gombrich's Concept of the Schema

The concept of the schema is central to Gombrich's discussion on pictorial representation, however it is a term for which Gombrich infers, but does not stipulate a particular definition. The following definition as found in the American Psychological Association, online dictionary,[68] concurs with the definition inferred by Gombrich:

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[61] Maria Scott, "Lacan's 'Of the Gaze as Objet Petit a ' as Anamorphic Discourse." *Paragraph* 31, no. 3 (2008): 320, accessed October 5,2021. https://doi.org/10.3366/E0264833408000308

[62] Ibid., 333.

[63] Ibid., 329.

[64] Lopes, *Understanding Pictures*, 34.

[65] Ibid., 129.

[66] Gombrich, *Art and Illusion*, 95

[67] Maureen Furniss, *Art in Motion: Animation Aesthetics*, revised edition, (Eastleigh UK: John Libbey Publishing, 2007), 71.

[68] American Psychological Association Online Dictionary, "Schema," accessed June 2, 2021, https://dictionary.apa.org/schemas

Schema:n. (*pl.* **schemata**)

1. a collection of basic knowledge about a concept or entity that serves as a guide to perception, interpretation, imagination, or problem solving. For example, the schema "dorm room" suggests that a bed and a desk are probably part of the scene, that a microwave oven might or might not be, and that expensive Persian rugs probably will not be.

2. a cognitive structure representing a person's knowledge about some entity or situation, including its qualities and the relationships between these. Schemas are usually abstractions that simplify a person's world.

According to Gombrich, "all representations are based on schemata which an artist learns to use."[69] He describes the schema, engaged by the artist in creation of a picture, as being "the first approximate, loose category which is gradually tightened to fit the form it is to represent."[70]

It is my understanding then, that a schema is developed from an initial concept which presents to the artist's mind, a nonspecific idea of a subject, scene or state of affairs. In keeping with the notion of the beholder's share, the cultural origins of the artist or the viewer may have profound influence upon formation of the schema. While I personally create and appreciate art using schemata developed from a Western perspective, I acknowledge that other individuals may use schemata from cultures alternate to my own, for example schemata originating from an Indigenous perspective or an Eastern perspective.

Familiar historical examples of schemata used by Western pictorial artists may be found in generic representational genres such as landscape, seascape, portrait and still life. Mere mention of each of these genres will suggest, for those familiar with their application, a general unspecified though thematic visual framework. If for example attention is drawn to the schema of a landscape, the image that this brings to mind, may (or may not) include such things as an area of land, the sky above it and natural features such as landforms, waterways and botany, as well as man-made structures, such as houses or roads. The details of the initial mental image the generic schema of a landscape brings to mind are likely to be vague and changeable, however the schema may be developed and refined in the mind's eye so that,

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[69] Gombrich, *Art and Illusion*, 264.
[70] Ibid., 64.

in the example of the landscape, it comes to represent either a real or imagined place, with specific details about the things within the landscape.

Familiarity with an artist choice of schema, may evoke in the primed beholder a sense of expectation,[71] and this may facilitate in the perception of pictorial illusions. For example, within the schema of a realistically painted rural landscape, a small brown indeterminate figure represented only by a blob of paint beside a tree depicted in the background imagery, is more likely to be identified by the informed beholder as being a cow, rather than say a bear or piece of discarded furniture. This is because a cow matches the schema. The sense of anticipation created by the schema, guides the beholder's imaginings and their capacity to project; consequently they are more likely to identify the otherwise indeterminate blob of brown paint as being a cow.

According to Gombrich, the contribution made by the visual artist in seeking to create a pictorial representation of a particular subject, be it imaginary or actual, depends on a process that involves alternating between the schema and the pictorial image, comparing the two, and gradually modifying the pictorial image, so that it matches, to best effect the schema.[72] He refers to this process as "schema and correction."[73] In this process, the schema may also be further adjusted to best suit the medium or meet other physical constraints.[74] In this way, pictures resemble the schema that they are based upon.

In representational pictures, the schema encompasses all of the choices made by the artist. Variable options include but are not limited to choices in what is to be omitted and what is to be emphasised, the location of the implied viewpoint, colour, texture, tone, pragmatic decisions regarding scale, medium and choice of art form; as well as the adherence to or divergence from established artistic conventions and styles. Gombrich states that "every artist has to know and construct a schema before he can adjust it to the needs of portrayal."[75]

Adjustment of the schema is a problem-solving process which involves design mechanisms that facilitate the transference of the cognitive to a material form. It is the intentional shift by

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[71] Lopes, *Understanding Pictures,* 33.

[72] Gombrich's notion of schema and correction was in part inspired by ideas expressed by the philosopher Karl Popper (1902-1994), see, Karl R. Popper *Conjectures and Refutations, The Growth of Scientific Knowledge,* (London, Routledge and Kegan Paul, 1963).

[73] Gombrich, *Art and Illusion*, 64.

[74] Ibid., 99.

[75] Ibid., 99.

the artist, away from the generic "approximate, loose category" towards the specific, which Gombrich refers to in writing of a gradual tightening of the schema "to fit the form it is to represent."[76]

It is readily apparent that the concept of the schema may be applied to the encased contemporary art diorama, and many are named after the schema they represent, as in the case of Charles Matton's *Bathroom II* (Fig.2) and Lori Nix and Kathleen Gerber's *Beauty Shop* (Fig.3). Therefore, it is also foreseeable that the notion of "schema and correction" may have implications for my personal understanding of the studio processes I undertake in the creation of encased contemporary art dioramas.

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[76] Ibid., 64.
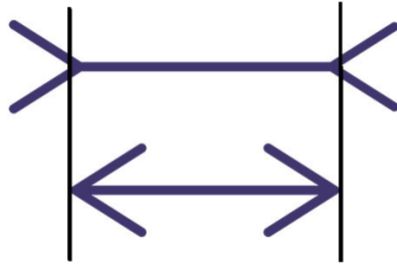
Fig. 1
The Müller-Lyer illusion. Devised by the German sociologist
Franz Muller-Lyer in 1889.

Fig. 2
Charles Matton, *Bathroom 11,* 1987, mixed media, 60 x 46 x 54 cm.

Fig. 3
Lori Nix and Kathleen Gerber, *Beauty Shop,* 2010, C-print; 101.6cm x 132.1 cm.
Image courtesy of the artists.

<center>**Chapter Two**</center>

<center>**Artist Made Animated Films: From Historical Origins to Contemporary Practice**</center>

2.1 Introduction

I use the term 'artist made animated films', to identify animated films made by visual artists, either working alone or in a small team to achieve artistic outcomes, as opposed to industrially produced animation in which the key objective is commercial success within entertainment industries. The pictorial design and the overall aesthetic of artist made animation is typically continuous with that of the artist's static pictorial artworks. It tends to be short in form and is often experimental in nature. There is usually a diminished emphasis upon, or a complete absence of narrative plot.

Artist-made animated films share a common technical ancestry with both live-action films and commercially produced animated films. Magic lanterns and optical toys are considered precursors to the invention of cinema. The Magic Lantern was invented by Dutch scientist Christian Huygens (1629-1695) in 1695,[77] and functioned by projecting light through a static translucent image on a glass slide, in such a way that it resulted in the image on the glass being able to be projected upon a flat surface, such as a wall or screen.

Optical toys, also known as philosophical toys,[78] were popular novelty devices which utilized a series of static images to create the illusion of animated movement.[79] The Phenakistoscope (1830) Zoetrope (1834) (Fig.5) , the and the Praxinoscope (1877) were hand operated apparatuses,[80] and typically involved the user spinning a component of the device, and then peering in at a designated viewing area. The animated illusions of motion created within were brief and cyclically repetitive, and consequently were not of sufficient temporal duration for plot or character development to occur.

The film projections by the Lumiere brothers, Auguste (1862-1954) and Louis (1864-1948), at the Grand Cafe, Paris in December 1895 are globally recognised as the first public

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[77] Maureen Furniss, *Animation: The Global History* (London: Thames and Hudson, 2017), 9.

[78] Nicholas, J, Wade, "Philosophical Instruments and Toys: Optical Devices Extending the Art of Seeing." Journal of the History of the Neurosciences 13, no.1 (2004): 102, accessed February 24, 2021. doi.org/10.1080/09647040490885538.

[79] Maureen Furniss, *Animation: The Global History*, 17.

[80] Thomas Gunning, "Forward: Hannah Frank's Pause", in *Frame by Frame: A Materialistic Aesthetic of Animated Cartoons*, Hannah Frank, (Oakland: University of California Press, 2019), xiv.

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screening of a projected film before a paying audience, and are generally considered to represent the birth of contemporary cinema. Just four months later, in April 1896, Thomas Edison (1847-1931) had his first public projected screenings, at Koster and Bial's Music Hall, a vaudeville venue in New York.[81]

Prior to the development and distribution of viable synchronised sound technologies, film screenings during the so called "silent era", approximately 1895-1929, usually occurred to the accompaniment of live musical performance. *The Jazz Singer* (1927) is recognised as the first feature length film in which music, speech and supplementary sounds are synchronised to the moving images.

Early colourisation techniques included hand painting,[82] and stencilling,[83] directly onto frame after frame of black and white celluloid film. Ongoing experimentation with machinery, chemical emulsions and photographic processes led to the development of full coloured film production. The first film made in three-strip technicolour was an animated cartoon produced by Disney Studios, *Trees and Flowers,* released in 1932.

Whilst it is important to consider the development of animated film within the broader context of the invention of cinema, a detailed account of the historical development of cinema is beyond the scope of my research.[84] Within this chapter I have focussed upon artist made animated films, as this is the genre of the animated film that I create and strive to integrate into encased contemporary art dioramas.

The chapter commences with an introduction to "The Persistence of Vision", a physiological phenomenon which facilitates the viewer's perception of movement within both live-action animated films. An overview of animated filmmaking processes is then provided. In lieu of an extended account of the historical development of cinema and animated film, I offer a brief overview of key moments in the development of cinema and animation. I then focus on early animation, prior to progressing to the animated films of the modernist artists of the

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[81] Wheeler Winston Dixon and Gwendolyn Audrey Foster, *A Short History of Film*, third edition, (New Jersey: Rutgers University Press 2018): 8. Kindle edition.

[82] Matthew Solomon, (ed). *Fantastic Voyages of the Cinematic Imagination, Georges Melies's Trip to the Moon,* (Albany: State University of New York Press, 2011), 2. Kindle edition.

[83] Street Sarah and Joshua Yumibe, *Chromatic Modernity: Colour Cinema, and Media of the 1920s*, (Columbia University Press, 2019): 227. Kindle edition.

[84] For a thorough history of animated film and its international technological development, I recommend *A World History of Animation* by Maureen Furniss, as listed in the bibliography.

1920s and 1930s. The chapter concludes with an account of contemporary artist made animated films, selected artists include Janie Gesner, William Kentridge, Lewis Klahr, Julian Opie and the Quay Brothers.

2.2 The Persistence of Vision: A Physiological Phenomenon

'The persistence of vision' is a term frequently used in film literature to account for the physiological factors within human visual perception which result in perceived illusions of movement in both live-action footage and animated film.[85] The following is a rudimentary description of the phenomenon as described within a contemporary animation manual:

> The whole concept behind animation relies on a phenomenon called the 'persistence of vision', which basically means that the retina of the eye will retain any image for a brief moment of time until replaced by another image, thus creating an illusion of movement, rather than individual static images.[86]

Illusions of both movement and metamorphosis within animated films are created through the presentation and viewing of multiple sequential incrementally altered static images. Within animated films, each additional static sequential image represents a progression further forward in time. The greater the number of static images presented before the viewer's eyes within a single second of time, then the smoother and more continuously flowing the illusions of movement and metamorphosis will appear to be. The lower the number of images presented per second, the more stilted the perceived movements or metamorphic transitions will seem.

2.3 Animated Filmmaking Processes

The static images required for the production of animated film may be generated in a variety of ways. Traditional animation techniques, also known as two-dimensional animation, involves the photographic capture of multiple incrementally altered two-dimensional images, and is strongly associated with hand drawn animation. Direct filmmaking processes involve scratching, or painting directly onto celluloid film, and therefore bypasses the need for a camera. Stop-motion animation, involves the photographic capture of incremental alterations and adjustments made to three-dimensional forms. The resulting effect is described as "giving life or spirit to otherwise lifeless objects such as dolls, mannequins, models, or clay figures."[87]

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[85] Barbara Anderson and Joseph Anderson, "Motion Perception in Motion Pictures", in *The Cinematic Apparatus*, Teresa de Lauretis and Stephen Heath (eds) (London: McMillan Press, 1980), 78. Kinde edition.
[86] Ken A Priebe, *The Art of Stop-Motion Animation*, (Boston: Thomas Course Technology, 2007), 9.
[87] J.P. Telotte, *Animating Space: From Mickey to Wall-e*. (Kentucky: The University Press of Kentucky, 2012), 37.

In computer generated animation the static images take the form of digital files, that may appear to resemble traditional two-dimensional animation or be rendered to emulate stop-motion animation or live-action film. In computer generated animation there is no need for a camera to photograph computer generated static digital images, as they are processed into animated film via digital technologies.

When live action film is merged with animated film, the result is hybrid animation. An artist made example, as further discussed in this chapter, is Len Lye's 1936 film *Rainbow Dance* (Fig.4).

The addition of synchronised sound to animated films allows for the formation of illusions of sound attribution, in which sound matches on-screen events.[88] For example, in narrative driven animated film characters appear to speak because the motion of their lips is synchronised with the spoken word components of the soundtrack.

2.4 Early Animation: The Hand of the Artist Motif

The transition from animated moving imagery being primarily associated with optical toys, to being primarily associated with filmic animation did not occur immediately upon the invention of cinema by the Lumiere brothers in 1895. It was more than ten years before the first cartoon with regular cinema distribution, J. Stuart Blackton's *Humorous Phases of Funny Faces* (1906) (Fig.6) was to be made.[89]

According to Thompson, "the animated cartoon was technically possible as soon as cinema itself existed in any form. In historical fact, early filmmakers attempted animated films only as isolated experiments."[90] Animation first began as "trick films" shown in vaudeville theatres,[91] and music hall shows.[92] Trick films were not entirely animated films, they were live-action films which contained transitory animated elements as special effects "created by using stop-motion objects" or "by scratching and painting individual frames."[93]

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[88] Kevin J Donnelly, *Occult Aesthetics: Synchronization in Sound Film*, (Oxford: Oxford University Press, 2014),2. Kindle edition.

[89] Furniss, *Global History*, 106.

[90] Kristen Thompson, "Implications of Cel Animation Technique" in *The Cinematic Apparatus* (eds) Teresa De Lauretis & Stephen Heath (London: Macmillan press, 1988),106. Kindle edition.

[91] Tom Sito, *Moving animation: A History of Computer Animation*. (Massachusetts & London: The MIT Press, 2103), 7.

[92] Furniss, *Global History*, 27.

[93] Ibid., 28.

J. Stuart Blackton's, *Humorous Phases of Funny Faces* (1906) was the first animated film involving sequential drawing on chalkboard,[94] and is generally cited as being the first example of drawn animation created using multiple drawings to be screened in America.[95] After the opening credits, a live-action scene of Blackton's actual hand is seen using a piece of chalk to draw the outlines of a top hat adorned male face on the right-hand side of an otherwise blank blackboard. Blackton's hand then disappears from shot, and the face of a woman then begins to appear as "an autonomous drawing" on the right-hand side of the board.[96] The two chalk outlined faces remain facing forward, the only movement apart from a cloud of smoke depicted as coming from a cigar in the male figure's mouth, is the stilted changing of facial expressions upon the two faces, from smiles to grimaces and back. Blackton's hand reappears and this time it is holding a piece of cloth, the static chalk drawings of the faces are at first blurred by the cloth, then erased.

The appearance of Blackton's hand in the film is of interest, as it serves to remind the viewer that the images are not mechanically generated but are from the hand of an artist. The inclusion of the artist's hand was thereafter used in many drawing based animated works. Furniss describes the "hand of the artist" as becoming a motif of the silent film era. Telotte also refers to the motif:

> One of the abiding images of early animation is of a hand reaching into the film to sketch a variety of characters or things on a sheet of paper, a large easel-mounted pad, or a chalkboard. Whatever is sketched then usually undergoes a series of amazing or simply amusing transformations at the hand of 'the hand'.[97]

Another prominent silent era animator to use the motif of the hand of the artist was Winsor McKay (1869-1934), as described by Nathan and Crafton:

> The first American masterpiece of animated cartoons was Gertie the Dinosaur, a short film made by the newspaper cartoonist Winsor McCay, who claimed to have drafted 10,000 paper drawings for it. The 1914 film has been celebrated for McCay's stamina, precision, and ingenuity as a draftsman, his uncanny knack for perspective, and his seemingly intuitive use of pioneering animation techniques to synthesize naturalistic movement.[98]

Various techniques were developed to try and overcome the creative barrier arising from the need for thousands of incrementally altered drawings, these eventually culminated in the

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[94] Priebe, *Stop-Motion Animation*, 9.
[95] Furniss, *Global History*, 32.
[96] Ibid., 32.
[97] Telotte, *Animating Space*, 25.
[98] David, L, Nathan and Donald Crafton. "The Making and Re-making of Winsor McCay's Gertie (1914)." *Animation: An Interdisciplinary Journal* 8, no. 1 (2013):24, accessed July 6, 2020, doi.org/10.1177/1746847712467569

invention of celluloid, or "cel" animation techniques by John Bray and Earl Hurd, a process which they patented in 1915.[99] Cel animation functions on the basis that a sheet of celluloid is both transparent, and able to be painted upon. Individual cels may be stacked to form layers, and each individual layer may contain a specific pictorial component. The background forms the lowest layer, and pictorial components may each have their own layer, and be incrementally altered as required. Cel animation eliminated the need to repetitively redraw the background for each frame. The acceleration of production processes was fundamental to the development, industrialisation, and commercialisation of mainstream animation. The use of many workers, and therefore many hands within mainstream animation production resulted in the demise of the motif of the solitary artist's hand.

2.5 Modernist Animated Films

> The body of work known as modernist animation can be described as an aspect of the larger realm of "experimental film," and many of its practitioners considered themselves to be artists, in general, rather than animators, in particular.[100]

While makers of mainstream animated films of the 1920s and 1930s strove to entertain mass audiences through the creation of humorous narrative driven animated films, modernist animators created works that were aligned to the aesthetic and theoretical concerns of modern art. Mainstream animation was representational in form and often had qualities and features derived from live-action film, such as the use of characters, props and settings to convey rounded narrative storylines with a beginning, a middle and an end. However, in complete contrast, early modernist animation was typically abstract in form, and "tended to be built around a theme, exploring concepts,"[101], such as the perceived relationships between colour and sound, or the notion that abstract animated film could be considered as being a form of "visual music."[102]

The significant disjuncture between the qualities of mainstream animation, may be accounted for when the artistic foundations of each genre is considered. Many of the early mainstream animators originated from light entertainment in the form of vaudeville performance or newspaper cartooning. In contrast, many of the modernist animators were painters prior to

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[99] Thompson, *Implications of Cel Animation*, 107.
[100] Furniss, *Global History*, 70.
[101] Furniss, *Global History*, 70.
[102] Malcolm Cook, "Visual Music in Film, 1921-1924, Richter, Eggeling, Ruttmann" in ed. Charlotte de Mille, *Music and Modernism, c.1849-1950* (Newcastle Upon Tyne: Cambridge Scholars Publishing, 2011), 206. Kindle edition.

becoming makers of animated films. German Dadaist Hans Richter (1888-1976), maker of the short abstract animated film *Rhythmus 21* (1921) (Fig.7) recalled the following in regard to his own work, and that of his friend, the Swedish artist Viking Eggeling (1880-1925), creator of the abstract short film, *Symphonie Diagonale* (1924) (Fig.8):

> Eggeling and I came directly out of the structural problems of abstract art, *volens-nolens*, into the film medium. The connection to theatre and literature was, completely, severed. Cubism, Dadaism, Abstract Art and Surrealism found not only their expression in films but also a new fulfilment at a new level.[103]

Prior to the onset of World War Two, Europe and particularly Germany was a vibrant hub for the creation of modernist animated films.[104] While Walter Ruttmann (1887-1941), creator of the pioneering abstract animated film *Lichtspiel Opus 1* (1921) (Fig.9) remained in his native Germany, other German animators found themselves to be displaced by Naziism. Oskar Fischinger (1900-1967), maker of *An Optical Poem* (1938) (Fig.10), relocated to the USA, and so did Richter. Lotte Reiniger (1899-1981), director of the acclaimed silhouette animation feature length film, *The Adventures of Prince Achmed* (1926*)* (Fig.11), relocated to England.[105] However not all modernist animators were of European origins, Len Lye (1901-1980), maker of *Rainbow Dance* (1936) (Fig.4), originated from New Zealand. Ellen Mary Bute (1906-1983), maker of *Rhythm in Light* (1934), was a Texan based in New York. Norman McLaren (1914-1987), maker of *Dots* (1940) was a Scottish Canadian.

Despite diversity in location, and an often limited means of distribution, occasional screenings, along with "literature, correspondence and collaboration" allowed modernist animators to be aware of the works of others within the genre.[106] There was variation in the type of venues in which such screenings took place, these ranged from the obscure and impromptu to major cinemas. In New York of the late 1920s, "experimental art films were difficult to find", and have been described as mostly "screened in alternative spaces, usually up several flights of stairs."[107] Film societies occasionally screened modernist animation,[108]

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[103] Hans Richter, "The Film as an Original Artform" *Film Culture,* no. 1(1955):19, 1955, quoted in Bruce R Elder, "Hans Richter and Viking Eggeling: The Dream of Universal Language and the Birth of Absolute Film" in *Avant-Garde Film*, (eds) Alexander Graf and Dietrich Scheunemann, (Amsterdam & London: Rodopi, 2007), 5. Kindle edition.

[104] Furniss, *Global History*, 71.

[105] Whitney Grace, *Lotte Reiniger: Pioneer of film Animation* (Jefferson: McFarland and Company, 2017),13. Kindle edition.

[106] Ibid. 159

[107] Kit Smyth Basquin, *Mary Ellen Bute: Pioneer Animator* (London: John Libby Publishing Ltd, 2020),28. Kindle edition.

[108] Roger Horrocks. *Len Lye: A Biography* (Auckland: Auckland University Press, 2002), 117. Kindle edition.

as did film festivals. *An Optical Poem* (1938) (Fig.10), a colourful abstract film by Fischinger, released by MGM in Technicolor, was a rare example of abstract animation gaining cinematic release. The film's opening titles forewarned an unaccustomed audience of its experimental nature.

> To most of us music suggests definite mental images of form and colour. The picture you are about to see is a novel scientific experiment – its object is to convey these mental images in visual form.[109]

Lotte Reiniger's stop motion silhouette animation film *The Adventures of Prince Achmed (1926)* (*Die Abenteuer des Prinzen Achmed*) (Fig.11), is celebrated as being one of the first feature length animated films ever made. Filmed in colour over a three year period, it had an accompanying tightly synchronised musical score by Berlin composer Wolfgang Zeller (1893- 1967).[110] Reiniger had images of scenes pasted into the score, to assist live musicians in coordinating image and sound.[111] During the filming Reiniger experimented with innovative animation making techniques that involved filming down through a backlit multiplane setup that used several horizontal panes of glass.[112] The upper panes would have her silhouette puppets placed flat upon them, while the lower panes had materials such as sand, soap and paint placed or smeared upon them to create visual effects such as haze,[113] a sense of pictorial depth was enhanced as the camera shifted focus from one layer to another.

The narrative nature of *The Adventures of Prince Achmed* was unusual for modernist animation, which tended to be abstract and non-narrative in form. It reflected Reiniger's theatrical background which included studies in acting.[114] As a child, Lotte had mastered the craft of silhouette paper-cutting and "built her own theatre to perform for her family and friends"[115] While the film did not attain mainstream release, screening in alternative spaces attracted the attention of many artists of the era, including Jean Renoir and Bertolt Brecht.[116]

Len Lye was a visual artist, experimental filmmaker and creator of kinetic sculpture. He made several short animated films in association with the film unit at the British General Post

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[109] Text from opening credits to animated abstract visual music film *An Optical Poem*, by Oskar Fischinger, 1938.

[110] Furniss, *Global History*, 75.

[111] Whitney Grace, *Lotte Reiniger,* 95

[112] Furniss, *Global History*, 76.

[113] Ibid., 75.

[114] Whitney Grace, *Lotte Reiniger,* 19

[115] Ibid., 16.

[116] Furniss, *Global History*, 76.

Office, including *A Colour Box (1935)* and *Rainbow Dance* (1936) (Fig.4). Each of these were colourful and highly abstract in form with lively musical scores. Lye's short films had tremendous novelty value, and were screened in a promotional capacity in British cinemas. The interjection of any advertising was discreetly reserved for the later sequences of the films, as noted by Furniss in relation to *A Colour Box*:

> A message "cheaper parcel post" added in text, displayed in stencil letters playfully cascading over the screen, in order to justify financing the film as a promotional effort.[117]

Lye's experimental direct filmmaking techniques included scratching the film surface with tools such as needles and nails,[118] or painting it by hand, or through the use of stamps and stencils.[119] When creating *Rainbow Dance* Lye employed hybrid animation techniques that combined live-action footage with animated film in a colourful kinetic montage of representational and purely abstract form. The use of "colour filters and colour separation processes" resulted in a vibrancy of colour that matched both the abstract background imagery and the flickering superimposed abstract foreground patterns.[120] Such effects were a "startling novelty" in 1936,[121] and as Rees correctly observes, "deftly anticipates the fusion of popular music and radical cinema in the music video genre."[122]

Ellen Mary Bute also used hybrid combinations of animation and live-action footage in her celebrated black and white experimental film *Rhythm in Light* (1934). Abstract stop-motion animation is discreetly intermingled with live-footage of a disparate assortment of objects and materials. These include:

> ...cellophane, ping-pong balls, eggbeaters, bracelets and sparklers to create abstract light forms and shadows. Many of these images were "out of focus" or filmed reflected on a wall for soft nuance and distortion that conceals the origin of the abstract apparition.[123]

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[117] Furniss, *Global History*, 87.

[118] Andrew R, Johnston, "Signatures of Motion: Len Lye's Scratch Films and the Energy of the Line" , in Karen Beckman (ed) *Animating Film Theory* (Durham: Duke University Press, 2007), 168. Kindle edition.

[119] Furniss, *Global History*, 87.

[120] Roger Horrocks. *Len Lye, 180.*

[121] Ibid., 118.

[122] A.L. Rees, 'Frames and Windows: Visual Space in Abstract Cinema", in *Avant-Garde Film*, (eds) Alexander Graf and Dietrich Scheunemann (Amsterdam & London: Rodopi, 2007), 65.

[123] William Moritz, "Mary Ellen Bute: Seeing Sound", Animation World Network, last modified May 1, 1996, accessed August 8, 2022: awn.com/animationworld/mary-ellen-bute-seeing-sound

2.6 Visual Music: Abstraction and Absolute Film

Modernist animators sometimes used the term 'absolute film' to describe abstract animation as it was considered to be a pure product of the film medium, with no parallels in nature.[124] Its non-narrative and non-representational qualities situated it in a filmic realm of its own. Visual music is a major subgenre of absolute film, its conception is attributed to the early modernist animators, examples include Richter's *Rhythmus 21* (1921) (Fig.7) and Eggeling's *Diagonal-Symphonie* (1924) (Fig.8). Visual music is founded upon the notion that abstract animated film is capable of conveying sensual qualities usually associated with music, and that abstract animation may be considered analogous to music, or even actually be a type of music for the eyes.

For some modernist artists the appeal of abstract art resided in its perceived potential to serve as new universal language "that moved beyond the limits of culture specific words and into the sensual realm of sounds, colours, design elements, and motion."[125] The idea that abstract images could possess qualities analogous to music preceded the development of visual music. The works of abstract painters Paul Klee (1879-1940) and Wassily Kandinsky (1866-1944) were often "influenced by music" and at times this was reflected in their choice of titles, for example Klee's *Harmony in Blue-Orange* (1923) and Kandinsky's *Composition VII (1913).*[126]

Kandinsky believed that "one could 'hear colours and that colour, like music, has the power to move the soul."[127] In this regard, some of Kandinsky's colour theories are readily associable with synaesthesia, a perceptual phenomenon in which one sensory experience such as a certain colour, will have strong associations with another, such as a specific sound. Visual music was strongly influenced by Kandinsky's writing of the 1910s.[128]

While static abstract paintings could visually imply movement, direction, spatial relationships and convey a sense of kinetic energy, animation had the ability to enact such impressions. Visual music typically has an accompanying soundtrack, and this may range from being

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[124] Furniss, *Global History*, 70.
[125] Furniss, *Global History*, 70.
[126] Brenda Lyn Leach. *Looking and Listening: Conversations between Modern Art and Music* (New York & London: Rowman & Littlefield, 2015), 215.
[127] Ibid., 53.
[128] Furniss, Global History, 71.

purely incidental, to seeming so synchronised that it made the animated movements appear to be thoroughly choreographed.

2.7 Contemporary Practice

The contemporary American Animator Lewis Klahr made his first animated films in the 1970s, [129] a time when Len lye was making his last. The Australian animator Dirk de Bruyn has created short hand-crafted abstract films using direct filmmaking techniques since the 1980s. Visual music continues to be made, contemporary works along with the now historic works of the modernist filmmakers are preserved and celebrated at the Centre For Visual Music[130] in Los Angeles, California. As visual music can now be rapidly created using computer-based technologies, it is difficult for the style of any particular artist to stand out in a field dominated by abstraction. This may in part explain why contemporary animation is marked by a return to the human figure, as seen for example in the work of William Kentridge (Fig.12), Julian Opie (Fig.13) and Lewis Klahr (Fig.14). While the works of these and other artists contain representational forms and figures, in keeping with the abstract animated films of the modernist artist, they tend to be bereft of a readily discernible narrative, plot or character development. In contemporary practice, static artworks made by artists may be exhibited side by side with related animated films.

Technological advances have altered the way that animated films made by artists may be viewed. For example, social media platforms facilitate the distribution and online sharing of animated films. However, while this makes examples of artist made animated films more accessible, it may also mean that they are likely to viewed on screens much smaller than those that the artist originally intended the work to be viewed upon, for example small mobile telephone screens. Consequently, such works may have a lesser sense of presence than those screened in cinemas or at alternative screening venues. This chapter concludes with an overview of the type of animation made by a selection of internationally renowned contemporary artists who make animated films.

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[129] Andrew Warstat, 'Adorno, Lewis Klahr and the Shuddering Image", in Jonathon Murray and Nea Ehrlich, (Eds.) *Drawn from Life: Issues and Themes in Animated Documentary Cinema* (Edinburgh: Edinburgh University Press,2019),145. Kindle edition.
[130] Center for Visual Music, (Website), accessed October 23, 2022, http://www.centerforvisualmusic.org

2.8 Quay Brothers: Stop Motion Puppetry

The London based, American born Quay Brothers, Stephen and Timothy, are a pair of identical twins who use stop-motion animation to create short films, such as *Street of Crocodiles* (Fig.15). Their animated filmmaking practice commenced in the 1980s and in 2012 their work was the subject of a major retrospective at the Museum of Modern Art, New York. The gothic aesthetic of their animated works is created through the use of incomplete puppet figures, screws and bits of metal, pieces of fluff, wood shavings and the like.[131] Wells describes their work as "re-animating materials, bringing to life matter which has the appearance of simply being detritus or dead."[132] According to Beck, the Quay Brothers have always claimed that they wanted "to make a world that is seen through a dirty pane of glass."[133] The Quay Brothers use miniature three-dimensional sets as the backdrops in their stop-animation films, allowing them to use illusion forming artifice garnered from not only the diorama, but also live-action films. Beck has described the Quay Brother's animated films as follows:

> Sets dominated by darkness; bizarre, unexplained nightmarish happenings; and odd camera angles – in short, all the things that put one in mind of the early French, German or Polish animators of the 1930s.[134]

2.9 William Kentridge: Hand Drawn Animation

The animated films of William Kentridge also use techniques and artifice associated with early animation. The majority of his animated films are created through the frame-by-frame photographic reproduction of images drawn in charcoal and chalk upon paper. Rather than using multiple incrementally altered images, Kentridge creates a single drawing, erasing those pictorial elements he wishes to alter and then redrawing them. It is a technique which closely resembles that used in 1906, by J. Stuart Blackton to create, *Humorous Phases of Funny Faces* (Fig.6). Kentridge has created animated works, such as his 2008 film *Breathe* which show opening live-action sequences of his hand at work, literally restoring the motif of the hand of the artist. Kentridge's animated works have been described as "reviving and

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[131] Wells, *Understanding Animation*, 91.

[132] Ibid., 91.

[133] Jerry Beck, *Animation Art from Pencil to Pixel, the World of Cartoon, Anime and CGI*, (New York: Harper Collins, 2004)*, 284.*

[134] Ibid, 284.

returning the magic of early cinema and adapting it to his time, creating animated films that surprise and delight."[135]

2.10 Julian Opie: Computer-Based Animation

Julian Opie's filmic animated works resemble the paintings he created prior to engaging with contemporary art animation. His animated filmic works are presented in gallery settings on large LCD screens, the animation and the screen combining to form the art object. His works may be described as being a type of minimalist pop art,[136] which uses thick dark drawing outlines and bright primary colours, the features of the individuals he depicts are reduced to circles, dots and curvilinear outlines. Opie's most recent works have focused on the profile of full-length life-sized images of the clothed human form, sometimes standing, but more often in an animated state of walking. Although the individuals depicted in his works appear to replicate human movements associated with walking, they do not move forward or progress against a background. Instead, they appear to remain on the spot, their actions being cyclical and repetitive. In this way Opie's work strongly resembles the cyclical animated images seen in early optical toys such as the Phenakistoscope (1830) and the Zoetrope (1834) (fig.5). In more recent times, he has expanded the subject matter of his short cyclical animation sequences to include animals.

Rotoscoping is a drawing technique used in animated film production. It was invented in 1914 and involves copying or tracing images frame by frame off live-action film.[137] Rotoscoping can be used as a system for creating sequential drawings for animation that convincingly emulate human or animal movement, as well as transitory background imagery exhibiting signs of motion parallax. Opie uses computer-based technologies to trace over and make hallmark modifications to photographic images imported into a computer, and in this way is reminiscent of analogue rotoscoping techniques.

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[135] Harmon Siegel, "Feats of Prestidigitation" in *William Kentridge: Smoke, Ashes, Fables*. Margaret K. Koerner ed. (New Haven & London: Yale University Press, 2017), 142.

[136] Mary Horlock, *Julian Opie* (London: Tate Gallery, 2004), 8, exhibition catalogue.

[137] Susannah Shaw, *Stop Motion: Craft Skills for Model Animation*, (Oxford: Focal Press, 2008), 5.

2.11 Lewis Klahr: Reanimated Nostalgic Imagery

Lewis Klahr (Fig.14) has been creating stop-action, artist made animation since the late 1970s.[138] His style is referred to as reanimation, because the works utilize existing images cut from magazines, as described by Warstat:

> Klahr is known for his unsettling works with dreamlike narratives, constructed from the remnants of 1940s, '50s and 60s American mass visual culture: the magazines, adverts and flyers left over from the so-called 'golden age' of US pop culture.[139]

Klahr's characters are roughly cut in block form, they are static, their expressions do not alter[140], they have been aptly described by Nayman as typically being "bewildered refugees from forgotten comic books."[141] Klahr uses stop-action techniques to make the roughly cut piece of paper, upon which the character is printed, appear to move. He juxtaposes his paper cut-out characters with other static nostalgic characters, and presents them against static retrospective representational, or at times abstract background imagery. The audio components of his films range from "soaring Mahler to pop music"[142]. In his 2020 film *Circumstantial Pleasures*, a glimpse of the artist hand is briefly seen altering the position of a cut-out image, thereby harking back to the early animation motif of the hand of the artist.

2.12 Janie Geiser: Reanimated Photographs

Janie Geiser is an American visual artist who works in animation, film, performance, puppetry and installation. Her films are recognised for their "recontextualization of abandoned images and objects, their embrace of artifice, and sense of suspended time."[143] Geiser's short stop-action animated films take the form of moving collages, constituted from found photographs and photographs of found objects such as dolls and wooden figures, and textures such as "wallpaper and scientific diagrams."[144] According to the artist, her films follow an emotional narrative but have no actual plot[145]; she uses collage to combine two or more things together, and thereby creates an associational sense of meaning.

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[138] Warstat, "Adorno, Lewis Klahr and the Shuddering Image", 145.

[139] Ibid., 145.

[140] Nayman, Adam, "Tragic Heroines, Comic Cuts", *Sight and Sound*, September 26, No 9, (2016) 55, accessed August, 2022.
https://search.ebscohost.com/login.aspx?direct=true&db=ibh&AN=117329789&authtype=sso&custid=univball&site=ehost-live&scope=site&authtype=shib&custid=univball

[141] Ibid., 55.

[142] Ibid., 55.

[143] National Gallery of Art, Washington, "Janie Geisner: Artist Talk." Descriptive text below YouTube video, posted July 11, 2020. Accessed August 8, 2022. https://www.youtube.com/watch?v=_vSbk8Ubkpw

[144] Genevieve Yue. *Lost at Sea: International Encounters in the Films of Janie Geiser, Grey Room, No. 36* Summer (2009):116, accessed August 8, 2022, https://www.jstor.org/stable/20627777

[145] National Gallery of Art, Washington, "Janie Geisner: Artist Talk." 3:10.

Geiser's animated films are inspired by the objects and photographs that she finds, they also serve as a guide to other visual elements bought into her films. In a 2019 artist interview at the National Art Gallery, Washington, Geiser described the processes involved in making the short black-and-white animated 2013 film *Arbor* (2013) (Fig.16). Having found a string bound set of nine small old black and white photographs in a Los Angeles thrift shop, she decided to make an animated film based upon them. The photographs were of a large group of adults on a hillside picnic. Geiser decided to recreate the day of the picnic by reanimating the photographs. She placed digital copies of the found photographs into photoshop and either removed or repositioned certain individuals, some photos were converted back to being negatives. As the photographs had trees and grassland in them, she took black-and-white photographs of plants from her garden and integrated these into the film, in turn the use of plants further inspired the use of plant-based wallpaper patterns. The film's soundtrack includes the sounds of flowing water, bird calls and an eerie soprano voice. At the end of the film the human figures gradually dissolve and disappear into the grassland setting.

Fig. 4
Len Lye, *Rainbow Dance,* still image of hybrid animation.
https://www.youtube.com/watch?v=7qlin0eZ9ag

Fig. 5
Zoetrope.
Image: Public Domain, https://creativecommons.org/licenses/by-sa/2.0/

Fig. 6
J. Stuart Blackton's *Humorous Phases of Funny Faces,* 1906, animated film still.
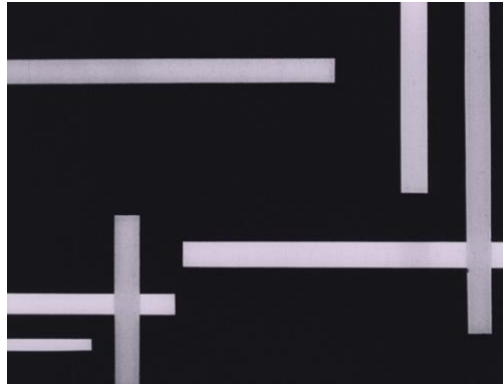
Fig. 7
Hans Richter, *Rhythmus 21*, 1921, animated film still.

Fig. 8
Viking Eggeling, *Symphonie Diagonale,* 1924, animated film still.
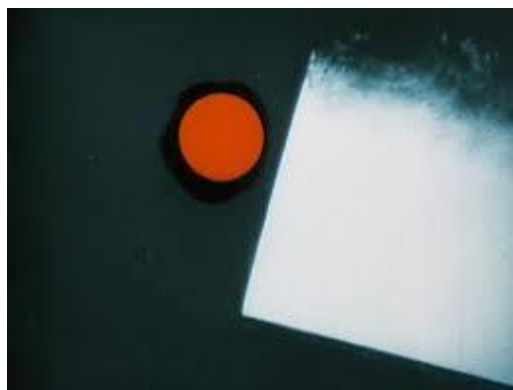
Fig. 9
Walter Ruttmann, *Lichtspiel Opus 1*, 1921, animated film still.
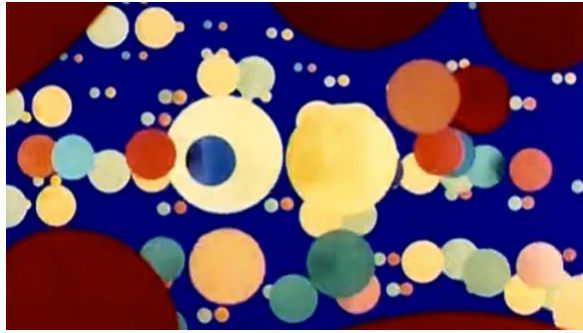
Fig. 10
Oskar Fischinger, *An Optical Poem*, 1938, animated film still.

Fig. 11
Lotte Reiniger, *The Adventures of Prince Achmed,* 1926, animated film still.

Fig. 12
William Kentridge, *Drawing from the Animated Film, Stereoscope* (1998-99),
charcoal, pastel, and coloured pencil on paper, 12 x 160 cm.
Collection Museum of Modern Art. New York.

Fig. 13
Julian Opie, Julian Opie, *Julian with T-shirt*, 2005, LCD screen with integrated software, 1102 mm x 658 mm.

Fig. 14
Lewis Klahr, *Sixty Six*, 2015, animated film still.

Fig. 15
Quay Brothers, *Street of Crocodiles,* 1986,
stop-motion animation still.

Fig. 16
Janie Geiser, *Arbor*, 2012, animated film still.

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Chapter Three

**The Encased Contemporary Art Diorama,
and its Illusionistic Precursors**

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> **The Encased Contemporary Art Diorama**: A static dioramic arrangement of strategically illuminated miniature three-dimensional realistically coloured representational forms and modelled background imagery, presented within an opaque encasement with a specified viewing portal. Created by contemporary artists, such dioramas depict in miniature real or imagined scenes of places and situations derived from the life-sized world. The main overall illusionistic quality of such dioramas centres upon their convincing mimetic resemblance to places and features found in the life-sized world.[146]

3.1 Introduction

Whereas the encased contemporary art diorama may be succinctly defined and described in a single paragraph, the attainment of a definitive meaning of the term 'diorama', relevant to all of its multitudinous and various incarnations, has recurrently presented an etymological problem for those who have attempted to write on the topic. Irene Fletcher Cypher's 1942 dissertation *The Development of the Diorama in the Museums of the United States*[147] is the earliest thesis that I know of to be on the topic of the diorama. Cypher observes that "the term, 'Diorama' is a contribution of the museums of the United States to the terminology of visual education, yet the museums have set up no standard usage governing the precise meaning of the word."[148]

Some fifty years after Cypher wrote her thesis, Karen Wonders' edifying 1993 dissertation, *Habitat Dioramas: Illusions of Wilderness in Museums of Natural History*[149] was completed. Wonders states that the word "diorama" has undergone a number of transformations, "from its patented definition in 1822 by Daguerre, to its current museological usage."[150] Daguerre's original large format entertainment diorama, and its imitative 19th century derivatives, were predominantly composed of two-dimensional images. This is in contrast to current language use, in which the term diorama is typically associated with visual presentations in which

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[146] My own definition of an encased contemporary art diorama.

[147] Irene Fletcher Cypher, "The Development of the Diorama in the Museums of the United States" (PhD thesis, New York University, 1942)

[148] Ibid., 2.

[149] Karen Wonders, "Habitat Diorama: Illusions of Wilderness in Museums of Natural History' (PhD thesis, Uppsala University, 1993)

[150] Ibid., 12.

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three-dimensional forms are predominant, while two-dimensional images fulfil the role of background imagery.

The difficulties associated with the definition of the term 'diorama' appear to be universal to all who have attempted to write on the history of the diorama. As recently as 2015 Kamcke and Hutterer have stated that the term is "still not clearly defined."[151]

There is however consensus that the term *diorama* was originally coined by the French artist and inventor Louis Jacques Daguerre (1787-1851) to describe the large intensely illusionistic[152] spectacles that he and fellow painter Charles Marie Bouton (1781- 1853),[153] first staged for audiences seated in a specially constructed theatre-like building in Paris in 1822.[154] According to Kamps the term "diorama", is derived from the "Greek *dia* (through) and *horama* (to see)."[155] There is minor variation on the literal interpretation of the term, including "through view"[156], "to see through"[157] ,"through sight"[158], or "translucent image."[159] Daguerre's original diorama was composed of opaque oil paintings on transparent canvas[160] screens[161], that changed appearance depending upon how they were illuminated. The apparent transparency of these screens[162] may well be the quality Daguerre referred to when originally coining the term diorama.

3.2 Four Historical Categories of Dioramas

The history of the diorama crosses many cultures, disparate geographical locations and unrelated periods of time. Unlike the relatively recent and chronologically linear history of

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[151] Claudia Kamcke and Rainer Hutterer, "History of Dioramas", in *Dioramas: History, Construction and Educational Role*, Sue Dale Tunnicliffe and Annette Scheersoi, (eds.), (New York & London: Springer, 2015),7. Kindle edition.

[152] Mimi Colligan, Canvas Documentaries: Panoramic Entertainments in Nineteenth-Century Australia and New Zealand, (Melbourne: Melbourne University Press, 2002), 17.

[153] Erkki Huhtamo, *Illusions in Motion: Media Archaeology of the Moving Image and Related Spec*tacles, (The MIT Press, London, 2013),139.

[154] Colligan, *Canvas Documentaries, 2002,* ix.

[155] Toby Kamps, *Small World: Dioramas in Contemporary Art*. (San Diego: Museum of Contemporary Art, 2000),6, exhibition catalogue.

[156] Colligan, *Canvas Documentaries, 2002,* ix.

[157] Kamps, *Small World: Dioramas in Contemporary Art*, 6.

[158] Wonders, *"Habitat Dioramas: Illusions of wilderness in Museums of Natural History",* 12.

[159] Kamcke and Hutterer, *History of Dioramas, 10.*

[160] Ibid., 10.

[161] Cypher, *The Development of the Diorama,* 67.

[162] Ibid., 67.

animated film, the history of the diorama reaches back to ancient periods of time[163], is disjointed and chronologically non-linear in form. The topic is further complicated by inconsistencies in the meaning of the term diorama, and by the likelihood that the diorama has been independently invented more than once[164]. An all-encompassing encyclopaedic account of the history of the diorama and its many diverse manifestations would constitute a voluminous tome, and as such is well beyond the scope of this thesis.

It should also be noted that my research is centred upon the illusionistic capacities of the encased contemporary art diorama, however not all precursory historical examples of dioramas or diorama-like objects possess readily discernible illusionistic qualities, and therefore are of diminished interest. Unlike animated film, in which the "persistence of vision"[165] results in the perception of fundamental illusions of movement or metamorphosis, the illusionism experienced within dioramas has no such physiological basis. Instead, it is dependent upon the ability of those who have created the diorama to persuade and momentarily convince the viewer that the depicted scene is actual, rather than just a staged imitation.

Despite the enduring etymological difficulties associated with the term diorama, it is possible to identify four historical categories of dioramas, or diorama-like objects. Each category is determined by the original purpose for which individual dioramas included within it were created. These categories are religious dioramas, entertainment dioramas, pedagogical dioramas and art dioramas. In the following section I provide indicative examples of dioramas and diorama-like objects assignable to each category. While my focus is upon the category art dioramas, I briefly elaborate upon conspicuously illusionistic examples from other categories, these are Daguerre and Bouton's theatre-like diorama of 1822, museological habitat dioramas and The Thorne Miniature Rooms at the Art Institute of Chicago. .

3.3 Religious Dioramas

The category religious dioramas encompasses dioramas made for use in relation to systems of faith and worship. Egyptian funerary models, created to "accompany the deceased into the

[163] David Revere McFadden, *Otherworldly Optical Delusions and Small Realties* (New York: Museum of Art and Design, 2010),8, exhibition catalogue.
[164] Kamcke and Hutterer, *History of Dioramas*, 7.
[165] Priebe, *Stop-Motion Animation,* 9.

after-life",[166] are the oldest known objects within the category, they are also the earliest known extant examples of dioramas in general:

> Small painted wooden models of environments, such as gardens, granaries and slaughterhouses, have been found in Egyptian tombs dating from 2,500 B.C.[167]

Other examples within the category includes 18th century mixed media[168] Italian[169] crèches depicting the Biblical story, and the memento mori[170] relief wax works of the Neapolitan nun Caterina Julianis (1695-1742*)*, such as *Time and Death* (Fig.19).

I find that when I look at certain examples of dioramas from the category of religious dioramas, that I can detect evidence of artifice later used in encased contemporary art dioramas, such as modelled representational forms, uniformed miniature scale, and in some examples faded though mimetic colouring. However, despite the evidential presence of such artifice, I find that I fail to perceive within such dioramas, notable illusions of mimetic resemblance to places or situations from the life-sized world. This is because, in keeping with Gombrich's notion of the beholder's share, as a twenty first century Western viewer, I am not familiar with the schemata depicted in such works. For example, I find the schema of the bakery, as conveyed in a section of the Egyptian funerary model, *Model Bakery and Brewery from the Tomb of Meketre* (Fig.17), to be inconsistent with my own ideas and expectations regarding just what constitutes a bakery.

Nonetheless, when viewed at the time of its making, a viewer familiar with both the schema of an ancient Egyptian bakery and the highly stylistic mode in which it is depicted, may well have beheld convincing illusions of resemblance.

3.4 Entertainment Dioramas

The category entertainment dioramas encompasses dioramas and diorama-like objects created to amuse those who view them. Indicative examples include, but are not limited to dollhouses, model railways, and 18th century automatons. The late nineteenth century glass encased anthropomorphic dioramas created by Walter Potter (1835-1918) featured small

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[166] McFadden, *Otherworldly*, 8.

[167] Kamps, *Small World: Dioramas in Contemporary Art, 7.*

[168] Susan Stewart, *On Longing: Narrative of the Miniature, the Gigantic, the Souvenir, the Collection.* (Duke & London, Duke University Press, 1993), 61.

[169] McFadden, *Otherworldly*, 10.

[170] Eade, Jane. "The Theatre of Death." *Oxford Art Journal* 36, no. 1 (2013): 109, accessed September 5, 2022, http://www.jstor.org/stable/43825748

taxidermied animals displayed in amusing narrative contexts such as weddings or funerals, and were exhibited at his private museum in Sussex, England.[171]

More notable historical examples from the category, such as Daguerre and Bouton's diorama of 1822, and the Cosmorama, reinvigorated the way that oil paintings were viewed and strove to enhance their illusionistic qualities. In oil paintings illusions of resemblance are created through the use of mimetic colouring and recognisable outline forms,[172] while nuanced variations in tone create a sense of form and can imply texture.[173] Linear perspective, as devised by the Italian renaissance architect, Filippo Brunelleschi (1377-1446),[174] is applied to create visual illusions of pictorial depth within the flat surfaces of paintings, so as to contribute to a heightened sense of realism.[175]

The Dutch artist Samuel van Hoogstraten (1627-1678) used peepholes to restrict the viewer's visual access to the painted interior of his perspective box, *A Peepshow with Views of the Interior of a Dutch House* (1663) (Fig.18). Viewing peepholes were a defining feature of the popular small-scale 18th and 19th century European peepshows exhibited by iterant showmen. Cosmoramas were another lesser-known form of early nineteenth century peepshow, as described by Colligan:

> In this kind of 'high-class' peepshow, small oil paintings set into walls were viewed through convex glass lenses and a space between the glass and the pictures, thus magnifying and heightening the illusion.[176]

The panorama was invented by the Irish artist Robert Barker (1739-1806) in 1793. It involved the use of enormous cycloramic 360 degree[177] oil paintings that encircled the viewer, who would be situated on a central viewing platform, which physically distanced them from the painted picture surface. Elevated views of cities from around the world were a particularly popular[178] source of subject matter.

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[171] P.A. Morris. *Walter Potter and his Museum of Curious Taxidermy*, (Berkshire: MPM Publishing, 2008),8.
[172] Robert Hopkins, "Explaining Depiction", *The Philosophical Review*, 104, no.3 (1995): 433, accessed June 12, 2019, doi.org/10.2307/2185635
[173] Gombrich, *Art and Illusion*, 38.
[174] Malcolm Park, *"Brunelleschi's Discovery of Perspective Rule", Leonardo*, vol 4, no.3 (2013): 259, accessed August 8, 2022, http:www.jstor.org/stable/23468273
[175] Newall, Michael. *"Painting and Philosophy"*, *Philosophy Compass,* 9. No. 4 (2014):227, accessed November 5, 2021, https://doi.org/10.1111/phc3.12122
[176] Colligan, *Canvas Documentaries,* 21.
[177] Ibid., 9.
[178] Ibid., 10.

As previously stated, the French artist and inventor Louis Jacques Daguerre, coined the term 'diorama' to describe the large "intensely illusionistic"[179] oil painting based spectacles that he and fellow French painter Charles-Marie Bouton,[180] created and staged for paying audiences in especially constructed theatre-like building,[181] first in Paris (1822) and later London (1823),[182] (Fig.20). The method of presentation and illumination varied from that of Barker's panorama in ways that were devised to resolve the implausibility of static images by imbuing them with light-based illusions of metamorphosis. Natural light, which entered through windows at the rear of the stage area of the theatre-like diorama building, was manipulated in ways that gradually altered the appearance of the semitranslucent oil paintings; front lighting would reveal one aspect of the oil paintings, while backlighting would reveal another.

Rather than standing on a viewing platform, as in the panorama, the diorama viewers were seated in a "darkened"[183], "circular mobile auditorium."[184] The diorama building was specifically designed to show two dioramas in one viewing session, the auditorium rotated so as to accommodate this, first facing one diorama, and then rotating to face the next. The seats faced a "large aperture"[185], also described as "a darkened tunnel"[186], and it was through this opening that the audience viewed the large, 22 x 14 metre strategically illuminated *"vivid and highly detailed"*[187] oil paintings on semi translucent canvases. The paintings depicted "sacred places such as Trinity Chapel in Canterbury Cathedral"[188], "Holyroodhouse Chapel, and others were of exterior spaces such as the environs of Paris, the Harbour at Brest, and the city of Rouen."[189] Scenes of gothic structures and ruins attained much popularity.[190]

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[179] Ibid., 17.

[180] Huhtamo, *Illusions in Motion*, 139.

[181] Colligan, *Canvas Documentaries,* ix.

[182] Huhtamo, *Illusions in Motion*,141.

[183] Ibid., 144.

[184] Colligan, *Canvas Documentaries*, 18.

[185] Ibid, 17.

[186] Huhtamo, *Illusions in Motion*, 145.

[187] Theresa Leininger-Miller, "Daguerre's Sole Extant Diorama, Recently Restored", *Nineteenth-Century Art Worldwide*. 13. no 1, (2014):1, accessed October 11, 2021, https://www.19th-cartworldwide.org/index.php/spring14/leininger-miller-reviews-daguerre-s-sole-extant-diorama-recently-restored

[188] Huhtamo, *Illusions in Motion*, 151.

[189] Theresa Leininger-Miller, "Daguerre's Sole Extant Diorama", 1.

[190] McFadden, *Otherworldly*, 15.

The use of restricted visual access is associated with an array of examples from within the category of entertainment dioramas, and as such is precursory to the use of viewing portals within the encased contemporary art diorama.

3.5 Pedagogical Dioramas

The category pedagogical dioramas encompasses dioramas made to educate and inform those who view them. Better known examples from within the category include museological habitat dioramas featuring taxidermied wildlife specimens, anthropological dioramas and battle scene dioramas. Lesser-known examples include Frances Glessner Lee's (1878-1962), 1940s miniature scaled dioramas based on actual murder scenes, replete with dollhouse-like furnishings and contorted doll-like murder victims; their function was to train American homicide investigators in forensic techniques. In Chicago during the 1930s and 40s, Narcissa Niblack Thorne (1882- 1966), a patron of the Art Institute of Chicago, "assembled a group of skilled artisans to create a series of intricate rooms on a scale of 1:12."[191] The purpose of the resulting sixty-eight miniature rooms, now known as The Thorne Rooms, was to educate the viewing public about the history of interior design. The New York World Fair of 1939 featured among many other dioramas *The City of Lights*, a huge diorama created on a miniature scale, it depicted the city of New York, and functioned to demonstrate "the city's resilience", thanks to Consolidated Edison, a leading power company.[192]

Within the category of pedagogical dioramas, I find the habitat diorama to be of particular interest, as it is renowned for its illusionist qualities:

> Habitat dioramas are natural history scenarios which typically contain mounted zoological specimens arranged in a foreground that replicates their native surroundings in the wild. Ideally the three-dimensional foreground merges, imperceptibly into a painted background landscape, creating an illusion -if only for a moment -of atmospheric space and distance.[193]

Unlike the miniature scale of the encased contemporary art diorama, habitat dioramas are of a life-sized scale, this is because the taxidermied specimen or specimens, which form the centre piece of such dioramas, also determine the scale. Large format habitat dioramas, such as *Gorilla* (Fig.21) and *Alaska Brown Bear,* at the American Museum of Natural History, were typically created by a specialized team of lighting technicians,

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[191] The Art institute of Chicago "Thorne Miniature Rooms", accessed August 8, 2022, artic.edu/highlights/12/thorne-miniature-rooms

[192] Kristian Moen, *New York's Animation Culture: Advertising, Art, Design and Film, 1939-1940*, (Switzerland: Palgrave Macmillan, 2019). Kindle edition, 86.

[193] Wonders, *Habitat Dioramas: Illusions of Wilderness, 9.*

"taxidermists, foreground preparators, and background painters."[194] The realistic background painting, rendered on a curved surface with a precise and coordinated use of linear perspective, "is critical to the overall illusion of space, distance, and environment."[195]

According to Rugoff:

> The illusionistic perspective utilized by dioramas addresses a specifically positioned viewer: essentially, a complex system- a specially shaped alcove in which three-dimensional objects and painted backdrops are arranged to create the sensation of a coherent deep space- is only effective when looked at from a frontal angle.[196]

Some examples of habitat dioramas feature a narrow window that "limits sightlines"[197] and "confines the spectator to a central viewing point, from which position the most convincing imitation of reality is produced."[198] According to Wonders, "The standpoint of the spectator on the floor of the hall in front of the exhibit is the most fundamental premise of the exhibit design."[199] Concerns regarding the physical positioning of the viewer in relation to the diorama, serve as an understated acknowledgment that perception is embodied, and that altering the physical position of the viewer, and hence their viewpoint upon the diorama, will have either a detrimental or a beneficial effect upon the viewer's perception of visual illusions. The strategic positioning of the embodied viewer is also fundamental to the artifice used in contemporary art dioramas, it is achieved through the use of the viewing portal, which restricts and defines the viewer's visual and physical access to the diorama's contents.

The physical format of the sixty-eight illusionistic dioramas, known as the Thorne Rooms, bares uncanny resemblances to that of the encased contemporary art diorama. However, their function is pedagogical, and they were created in an era that predates and excludes them from classification as contemporary art. While I have not personally viewed the Thorne rooms, I note that in photographs they appear to be immaculate, even opulent, as in *French Salon on the Louis XDVI period, c1780*, c 1937 (Fig.22). Like

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[194] Karen Wonders, "Habitat Dioramas as Ecological Theatre", *European Review*, Vol. 1, No. 3, (1993):100, accessed June 3, 2021, Doi.org/10.1017/S1062798700000673

[195] Steven Christopher Quinn, "The Worlds Behind Glass", *Natural History*, 115, no.3 (2006):48.

[196] Ralph Rugoff, "Bubble Worlds" in *Small World: Dioramas in Contemporary Art*. (San Diego: Museum of Contemporary Art, 2000),13, exhibition catalogue

[197] Quinn, "The Worlds Behind Glass," 49.

[198] Karen Wonders, *Habitat Dioramas: Illusions of Wilderness,* 211.

[199] Ibid., 210.

Queen Mary's Dollhouse of 1920 **,** "they present extravagant displays of upper-class ways of life that were meant to stop time and thus present the illusion of a perfectly complete and hermetic world."[200] Unlike examples of encased contemporary art dioramas such as *Beauty Shop*,(Fig.3) by Nix and Gerber, or *The Bedroom of a Disorderly Woman* (Fig.23) by Matton, they do not show disorderly though expressive signs of wear and tear, or human habitation.

3.6 Art Dioramas

The category art dioramas encompasses dioramas specifically created to be appreciated as pieces of art, and for no other purposes. Such stipulation is required as it is often tempting to overlook the original purpose for which dioramas were created and admire them for their artistic qualities alone. Even Wonders has remarked, "Surprisingly the habitat diorama has never been acknowledged as an artform."[201] I suggest that this is clearly because in the habitat diorama scientific correctness is prioritised over any concerns regarding self-expression. Nonetheless, it does raise questions about just what qualities result in a diorama being categorised as a piece of art. It could well be argued that all dioramas are artistic in some way. The history of the dioramas discussed so far in this chapter demonstrates a recurrent use of oil paintings and sculpted forms, however despite the presence of these mediums I have categorised them as being either religious dioramas, entertainment dioramas or pedagogical dioramas on the basis of the original function that they were created for. Accordingly, I have applied a similar process to identifying dioramas that may be classified as art dioramas. For purposes of clarity, I have only included dioramas that have been created by established artists for the purpose of exhibiting them in their full three-dimensional form in an art gallery.

It is necessary to specify that the actual three-dimensional diorama is exhibited, because in contemporary art practice, there are a number of visual artists who typically create dioramas in a miniature scale in a variety of formats, for the sole purpose of photographing them under controlled lighting conditions. The resulting photographs are usually the final artwork, while the dioramic model frequently only forms part of the creative process and therefore is rarely

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[200] Stewart, *On Longing: Narrative of the Miniature,* 62.
[201] Karen Wonders, *Habitat Dioramas: Illusions of Wilderness,* 226.

publicly exhibited[202]. Artists who work this way include Oliver Boberg and Thomas Demand[203]. The principal illusion in such works is that the viewer of the photograph believes that the image is of an actual life-sized place, until they are informed otherwise. Analysis of how this process functions resides in a line of enquiry relevant to the field of photography, and therefore is beyond the scope of my research.

Dioramas created by contemporary artists can be divided into two broad categories, each of which is determined by the physical format in which the diorama is presented to the viewer, these two formats essentially being dioramas that are encased and those that are not. I refer to those that are not encased as being of an open format, as described below.

3.7 Open Format Contemporary Art Diorama

Open format dioramas are usually set upon a horizontal plane and incorporate arrangements of miniature three-dimensional models, presented either with or without vertical two-dimensional background imagery. In contemporary art practice, the open format diorama is often used to depict architectural exteriors, streetscapes and landscapes. The physical layout of such dioramas typically allows the viewer to have unhindered visual access to all exhibited components of the diorama. They may be viewed from a designated area at the front of the diorama, or if presented in the round with 360 degrees of visual access, the viewer may walk around them and look down upon them from an elevated range of viewpoints. Dioramas that are completely enshrouded in transparent glass also belong to this category. Contemporary artists who have created and exhibited dioramas using an open format include Michael Ashkin, Mat Collishaw, Thomas Doyle, Nils Norman, Liliana Porter and Clara Williams.

In creating open format dioramas, the artist has limited opportunities to conceal any artifice used in the formation of illusions. For example, there is no place in which to conceal mirrors so as to create illusions of augmented space, and there are limited opportunities to conceal light bulbs, so as to create atmospheric lighting. The delimitation between the fictional scene depicted in an open format diorama and the surrounding actual environment in which it is exhibited is not always readily defined. This physical property and lack of delimitation can

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202 Alfred Ehrhardt Foundation, "Models of Nature in Contemporary Photography," Last modified January 6, 2021. Accessed June 9, 2023. https://www.aestiftung.de/en/exhibitions/past/2020-en/modell-naturen-in-der-zeitgenoessischen-fotografie/
203 Nina Azzarello, "Grotto Installation by Thomas Demand at Fondazione Prada", last modified 22 September 2017, (accessed 9/06/2023)https://www.designboom.com/art/grotto-installation-thomas-demand-fondazione-prada-12-12-2015/

leave the viewer susceptible to distractions that may detract from the illusionistic capacities of such dioramas. For example, in viewing an open format diorama presented in the round on a benchtop or on a plinth, the viewer may find themselves facing another viewer standing on the other side of the diorama, or see built aspects of the gallery space that are incongruous with the depicted scene, such as life-sized walls, doors and windows.

As the open format diorama has a limited capacity to form illusions, other than those associated with mimetic depiction, and lacks a capacity to conceal artifice, I have chosen not to attempt to integrate animated films into such dioramas. Consequently, the open format contemporary art diorama sits outside the area of interest of my research. Nonetheless, the open format diorama remains a valid and valued form of contemporary art, which shares many fundamental physical qualities with the more complex encased contemporary art diorama, as described below.

3.8 The Encased Contemporary Art Diorama

As the name partially suggests, the format of encased contemporary art dioramas involves the physical components of the diorama being exhibited within the confines of an opaque encasement with a specified viewing portal. In contemporary art practice the portal tends to take the form of a transparent glass or perspex window situated at the front of the encasement, facing towards the viewer. The portal may also take the less common form of a small opening or a tiny peephole.

While the opaque encasement, usually in the form of a box, restricts the viewer's visual access to the diorama's contents, the viewing portal permits the viewer to see a limited range of aspects as defined by the artist. The positioning of the viewing portal provides the artist with a degree of control over that which can and that which cannot be seen within the encasement, while also providing a point of focus towards which they may direct the formation of illusions. Additionally, the encasement provides the artist with a convenient and practical means by which to conceal much of the physical evidence of the illusion forming artifice they have used, this includes wiring, light bulbs, support braces, and strategically positioned mirrors. The encased contemporary art diorama is often engaged by artists to depict highly atmospheric architectural interiors, however exterior scenes, and scenes which depict combinations of interior and exterior spaces may also be depicted with equally convincing illusionistic effect.

3.9 Emergence of the Encased Contemporary Art Diorama

The exhibiting of miniature scaled dioramas as pieces of art in art gallery settings is a relatively recent practice in the long history of art. As far as I have been able to discern, it was only at the very dawn of the 21st century that there had been enough collective creative activity within the field for a group exhibition of dioramas created by contemporary artists to be held. That exhibition being *Small Worlds* held at The Museum of Contemporary Art, San Diego in January 2000. However, there had been pioneering independent exhibitions prior to this, dating back to the 1980s, by the French artist and filmmaker Charles Matton (1931-2008), as discussed later in this chapter.

To look slightly back further in time from the 1980s, back to the late 1960s, a unique and potentially influential dioramic artwork by the French Artist Marcel Duchamp (1887-1968) may be found. Described by McFadden as being "pivotal to the history of dioramic installation,"[204] *Etant donne,*[205] (Fig.24) created over a twenty-year period from 1946 to 1966, was Duchamp's final major work, and was posthumously placed on permanent display at the Philadelphia Museum of Art in 1969. In accordance with the complex assembly instructions outlined in an illustrated manuscript written by Duchamp,[206] the piece was installed in a dedicated space behind a wall with a "heavy wooden door" fitted to it.[207] The viewer looks in at the piece through two peepholes situated in the door to see "part of a female figure lying in a landscape with her legs open."[208] According to Rugoff the "latent relationship between voyeurism and art provides one of the central conceits of the 20th century's most celebrated diorama-like artwork."[209]

The three-dimensional near-life sized figure of the woman is situated in an artificial environment reminiscent of a habitat diorama, tall grass or possibly weeds grow on an undulated modelled terrain, while background landscape imagery assists in contextualising the location of the manufactured foreground scene. The image is backlit, while the lamp in

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[204] McFadden, *Otherworldly*, 15.

[205] Full name in French: *Etant donnes:1.la chute d'eau/2.le gaz d'eclairage*. English Translation- *Given 1. The Waterfall, 2. The Illuminating Gas.*

[206] Michael Newman, "Towards the Reinvigoration of the 'Western Tableau': Some Notes on Jeff Wall and Duchamp", *Oxford Art Journal*, 30, No. 1, (2007):91, accessed June 16, 2021, https://www.jstor.org/stable/4500047

[207] Rugoff, *Bubble Worlds,* 13.

[208] Ibid., 14.

[209] Ibid., 13.

the figure's raised hand shines light.[210] The use of realistic colouring and forms, along with strategic lighting are harbingers to the artifice used to create illusions within encased contemporary art dioramas. However, unlike *Etant donnes* the encased contemporary art diorama is usually of a miniature scale, and the use of human figures or figurines is shunned.

The age of the piece, with its commencement date of 1944, places it in an era that predates contemporary art practices. Newman describes the vision seen within *Etant donnes* as an "apparition."[211] According to the Philadelphia Museum of Art Website, "No photograph can communicate the intensity of the unique visual experience" of seeing *Etant donnes.*[212]

According to Newman, the realistic aesthetic of *Etant donnes "*is about as anti-Modernist a work as one could conceive."[213] It is a valid point which is also applicable to both habitat dioramas and encased contemporary art dioramas, as stated by Wonders: "The diorama's pictorial premise is based on a pre-modernist approach to representation in art."[214] In regard to the encased contemporary art diorama, there are two key reasons for this. The first is that the encased diorama only emerged as a recognised artform in the 1980s, a time long after the pictorial experimentation of major 19th and 20th century art movements. There are no encased contemporary art dioramas, let alone dioramas in general, that can be classified as examples of impressionism, abstract expressionism, pointillism, cubism or any other movement that departs from a rigid adherence to realism. This is unlike the history of animated films, which as discussed in *Chapter Two,* encompasses the creative endeavours of modernist animators from the 1920-40s, and the production of purely abstract works.

The second, and more important reason why the encased contemporary art diorama demonstrates a resolute adherence to an aesthetic based on realism, is that the main overall illusion evoked in such dioramas is one of an illusionistic resemblance to actual places in the life-sized world. The objective of creating convincing simulations of the visual and spatial qualities of actual places predefines the artists mimetic colour palette and requires the use of realistically shaped three-dimensional forms. The overt use of stylisation or abstraction

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[210] Michael Newman, "Towards the Reinvigoration of the 'Western Tableau'", 91.
[211] Ibid, 87
[212] "Marcel Duchamp: etant donnes", Philadelphia Museum of Art, accessed 10 November,2022, https://philamuseum.org/calendar/exhibition/marcel-duchamp-etant-donnes
[213] Michael Newman, "Towards the Reinvigoration of the 'Western Tableau''", 97.
[214] Karen Wonders, "Habitat Dioramas: Illusions of Wilderness", *226.*

would lessen the resemblance to actual places and therefore have a detrimental effect upon the creation and perception of illusions of resemblance.

The adherence to a realistic aesthetic has a profound homogenising effect upon the appearance of the scenes depicted within encased contemporary art dioramas, consequently it is not always easy to discern the work of one artist from another. By comparison, in painting the use of individual style, expressive brush stroke, self-determined colour palette, expressive form, regard or disregard for fine detail, or affiliation with art movements contributes to the work of one painter being readily discernible from the work of another. This is not the case in the encased contemporary art diorama, it has a conventional aesthetic akin to that of photorealism in painting. Individual expression is attained through the artist's choice of subject matter, underlying themes and the physical mode of presentation. Choices regarding the outer appearance of the encasement, the type of viewing portal used, along with the repertoire of illusionistic artifice drawn upon may also contribute to the recognisability of individual artistic "style".

The accomplished French painter and filmmaker Charles Matton (1931- 2008), made the first of his highly detailed miniature scaled encased dioramas for personal use as models for drawing and photographing in 1985.[215] Although it was not originally intended that they would be considered artworks in their own right, several of his glass fronted encased contemporary art dioramas, along with photographs and paintings derived from them, were exhibited at Palais de Tokyo in 1987.[216]

From the very beginning Matton's dioramas, contained details which discreetly conveyed a sense of human habitation, although no actual human figures were present. In *Bedroom of a Disorderly Woman* (Fig.23) Matton uses multiple small objects such as a handbag, a hairdryer and playing cards to convey a sense of the personality of the absent anonymous woman, whose bedsheets remain in disarray while daylight shines through drawn curtains. Several of Matton's other dioramas pay "homage to particular artists, writers or thinkers."[217] While the human subjects of these works are absent, their personalities and interests are conveyed through the depiction of objects, crafted on a

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[215] Sylvie Matton. *Charles Matton: Enclosures* (Paris: Flammarion, 2011), 13.
[216] Ibid., 19.
[217] Matthew Guy Nichols, review of *Charles Matton at Forum*, Art in America, 90, no.12, 108, accessed May 19, 2021.https://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=8570791&authtype=shib&site=ehost-live&scope=site&authtype=shib&custid=univball

miniature scale by Matton. For example, in his encased diorama, *Sigmund Freud's Studio* (1986), Matton reflects the psychologist's interest in collecting books and statuettes**,** while his diorama *Albert Giacometti Studio* (1986) is splattered and heaped with plaster, implying prior dynamic creative actions, while other work materials remain in waiting for later creative use. Some of Matton's dioramas are autobiographical reflections on places he has lived or worked, such as *The Large Loft, 26th Street, New York* (1986) (Fig.25)**,** and *Hotel de L'Esplanade, Annual Closure II,* (2005). As observed by Nichols:

> By outfitting some of his constructions with precisely calibrated partitions and mirrors, Matton creates the seamless illusion of rooms and hallways expanding far beyond the confines of the actual boxes.[218]

The American artist Helen Cohen (1930-2002) created her first encased contemporary art dioramas in the late 1980s. The unique feature of Cohen's nostalgic dioramas is that the encasement usually takes the form of vintage household appliances. Small openings, such as a slightly opened drawer, or a partially opened lid, serve as the viewing portal. The scene depicted within the vintage objects further explores the concept conveyed by the diorama's outer encasement. For example, in *Red Cover Breadbox*, (1996) a tin bread box contains a miniature kitchen, while in *Vanity Box with Mirrors* (1997) a 1950s small set of drawers suitable for use upon a dressing table, contains a miniature bedroom.[219] Like Matton, Cohen fabricates all aspects of the diorama interior, and uses strategic lighting to create illusions of time of day. The catalogue for the 2000 Exhibition *Small Worlds* quotes Cohen as stating that "accurate details and lighting are essential", without it the works would "just be dolls houses."[220]

The American artist Mark Dion creates encased contemporary art dioramas, as well as open format dioramas, and installation pieces that reflect upon and question the authority of large scientific institutions such as public museums. His encased contemporary art dioramas use the illusionistic format of the habitat diorama, including painted background imagery. His 1999 encased diorama *Landfill* depicts a rubbish dump. In *Paris Streetscape* (2017) (Fig.26) Dion uses taxidermied specimens of small scavenging animals such as pigeons, crows, rats and a cat, and situates them amid a constructed scene composed of rubbish bins, crushed cardboard boxes and sundry

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[218] Ibid., 108.
[219] Kamps, *Small World: Dioramas in Contemporary Art*, 20.
[220] Ibid., 20.

discarded objects such as a broken umbrella, a teddy bear and stacked newspapers. However, unlike the "romanticised",[221] or "idealised"[222] landscapes depicted in habitat dioramas, Dion shows the full chaotic grittiness of urban environments afflicted by human detritus. Dion's use of life-size scale is unusual for the encased contemporary art diorama, however it is necessary in his work as the scale has been set by the size of the taxidermied animal specimens.

Lori Nix, co-creator of the encased contemporary art diorama *Beauty Shop* (Fig.3), which was exhibited in its full three-dimensional form at the 2010 exhibition *Otherworldly*, identifies primarily as being a photographer. She and creative collaborator, Kathleen Gerber do not usually exhibit the actual diorama that they create, only the photographs. The theme of a dystopian future expressed in *Beauty Shop* runs through much of the work created by Nix and Gerber. According to Nix, "The impact of civilisation is shown by what remains in the absence of humans."[223]

American artist Patrick Jacobs is renowned for his intricate wall embedded encased contemporary art dioramas that feature highly illusionistic depictions of exquisite exteriors scenes, such as *Window Installation with Dandelion Cluster #3* (Fig.27). Jacob's use of a circular viewing portal fitted with a concave lens is a physical format that has become a recognisable feature of his works. In more recent works rather than showing the pristine beauty of natural environments, he demonstrates how chemical contamination by humans through the use of pesticide can lead to mutation and environmental degradation.

The Australian artists David Lawrey and Jaki Middleton have been working as a collaborative creative team since 2005. In 2010 they exhibited an encased contemporary art diorama titled *Consolidated life*. The outer part of the encasement took the form of a 2.7 metre tall model of a skyscraper. Two windows situated at "eyelevel" allowed the viewer to look in and see a dioramic recreation of an office space with a monotonous multitude of grey and white coloured office chairs and desks, desktop telephones and typewriters. The strategic use of mirrors within the piece, serves to create an illusion of

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[221] Geraldine Howie, "Dioramas as Constructs of Reality: Art, Photography, and the Discursive Space", in Dioramas*: History, Construction and Educational Role*, Sue Dale Tunnicliffe and Annette Scheersoi, (eds) (New York & London: Springer,2015),40. Kindle edition.
[222] Kamps, *Small World,* 10.
[223] McFadden, *Otherworldly,* 183.

augmented space and visually replicates the office scene, so that it seems to continue on into a distant though interior horizon. An artists' statement in the catalogue for the exhibition Otherworldly reads:

> Although our works depict miniaturised worlds that resemble reality, we expand these scenes to create impossible scenarios by incorporating optical illusions created with reflecting glass or mirrors.[224]

In 2019 David Lawrey and Jaki Middleton created a series of highly realistic dioramic depictions of menacingly long office building hallways, that seemed to continue ad infinitum until absorbed by a dark and distant vanishing point.

The French miniaturist and artist Dan Ohlmann is the proprietor of the Musee Miniature et Cinema in Lyon France. His dioramic works combine his skills as a sculptor and professional interior decorator. Like his museum, his encased contemporary art dioramas seem to be a celebration of the illusionistic capacity of the diorama. When visiting his museum, I was particularly impressed by the detail of his work *Maxim's Restaurant*. I felt that someone was showing me a personal three-dimensional photograph of a favourite place. I felt transported to the point that I began to select which table I would sit at, not too close to the depicted stage and away from any doors. Ohlman's other works featured intimate household interiors and large public spaces, such as an old disused cinema.

3.10 Prior Attempts to Integrate Live Action Footage

As far as I have been able to ascertain, there have been no prior attempts to integrate screen-based animated film into the encased contemporary art diorama. There have however been attempts to integrate live-action moving images of human characters or actors into encased contemporary art dioramas via means of video projection. In 2004 Matton made such a piece:

> *Debussy's Poisson D'Or* (2004) depicts a room with faded wallpaper and slightly worn oriental carpet. In the centre of the room is a grand piano. Using video projection, the piano stool is inhabited by a young man playing Debussy. The young man is in fact Matton's son, shimmering and not quite there in the projection, haunting and beautiful. This box has the atmosphere of a particularly vivid memory; a particularly resonant dream.[225]

I believe that the creation of *Debussy's Poisson D'Or* (2004) (Fig.28) has involved the adaptive use of an illusionistic technique known as "Pepper's Ghost", named after its

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[224] Ibid., 131.
[225] Colin Herd, Review of Enclosures, Charles Matton, All Visual Arts, London, October 2011: Aesthetica Magazine, accessed Feb 12, 2020, https://aestheticamagazine.com/infinity-in-miniature

inventor English Scientist John Henry Pepper in the early 1860s[226]. Pepper's Ghost (Fig.29) is a projection and reflection based illusionistic stage device:

> ...produced by a custom-designed magic lantern concealed beneath the stage that projected a strong light onto an actor positioned before a sheet of glass that extended from pit to ceiling between the audience and the stage. A moving image of the concealed actor would then appear superimposed ....on stage above.[227]

The objective of inhabiting the encased diorama with realistic human characters is different to my artistic intention of enhancing illusionism within the encased contemporary art diorama. I consider Matton's piece to be an attempt to in part resolve the fact that as embodied beings, we are simply too large to physically fit within the confines of miniature scaled encased contemporary art dioramas. Judging from photographic images of the piece and taking the historical origins of the technique into account, the character appears to be transparent, a feature which does not strike me as being particularly realistic. In 2011 David Lawry and Jaki Middleton used a similar technique to situate two live action actors in an encased diorama depicting the front garden of a suburban house. The use of video projection, live action footage, and Pepper's Ghost is not at all like my use of screen-based animation, as described in the next chapter.

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[226] Helen Groth, *Moving Images: Nineteenth-Century Reading and Screen Practices* (Edinburgh: Edinburgh University Press, 2013). Kindle edition, 113.
[227] Ibid., 101.

Fig. 17
Model Bakery and Brewery from the Tomb of Meketre, ca. 1981-1975 B.C.
Wood, gesso, paint, linen, 29 x 55 x 73 cm. Metropolitan Museum
of Art, New York.

Fig. 18
Samuel van Hoogstraten*, A Peepshow with Views of the Interior of a Dutch
House, c* 1655-60, Oil and egg on wood, 58 x 88 x 60.5 cm.
The National Gallery, London.

Fig. 19
Caterina De Julianis, *Time and Death,* 1727 (before), relief wax,
frame 83 x 108 x 20 cm. Victoria and Albert Museum, London.

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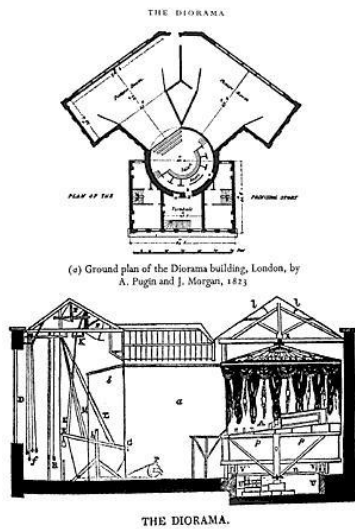
Fig. 20
A Pugen & J Morgan, *Ground plan of the Diorama building*, London, 1823.

Fig. 21
Gorilla, habitat diorama, American Museum of Natural History, New York.

Fig. 22
Narcissa Niblack Thorne (designer), 1937, *French Salon on the Louis XIV Period, 1660-1700,* miniature room, mixed media. 47.7 x 78.8 x 60.4 cm.
The Art institute of Chicago.

Fig. 23
Charles Matton, The *Bedroom of a Disorderly Woman,* 1991,
mixed media, 52 x 76.5 x 65.5 cm.

Fig. 24
Marcel Duchamp *Etante donne*, 1946-66, mixed media, 242.6 x 177.8 x 177.8 cm.
Philadelphia Museum of Art.

Fig. 25
Charles Matton, *The Large Loft, 26ᵗʰ Street New York, Installation no.III*, 1986
Mixed media, 83 X 165 x 86 cm.

Fig. 26
Mark Dion, *Paris Streetscape,* 2017. Iron, wood, stuffed animals, various
materials. 190 x 150 x 250 cm. Private Collection.

Fig. 27
Patrick Jacobs, *Window Installation with Dandelion Cluster #3* 2010,
mixed media, 29 x 37 x 24 cm.

Fig. 28
Charles Matton, *Debussy's Poisson D'Or*, 2004, mixed media with video projection,
88 x 54 x 92 cm.

Fig. 29
Stage set up for Pepper's Ghost. Illustration by Bertrand.

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<div align="center">**Chapter Four**</div>

<div align="center">**Materials and Methods**</div>

4.1 Introduction

My practice led research is an exploration of illusionism within the encased contemporary art diorama, and the possibility of enhancing such illusionism through the strategic integration of screen-based animated film. In using the term screen-based animated film, I refer to animated film that is shown on a screen, such as those that belong to television sets or computer monitors. This terminology is adopted to differentiate screen-based animation from projection-based animation, in which moving filmic imagery is projected onto a surface using either a film or video projector.

Within this chapter I discuss the origins of the project and the intended final exhibition. I discuss artistic themes, the methods and materials that I used in the step-by-step construction of the dioramas, as well as the digital technologies that I applied in the making of audio accompanied animated films.

4.2 Origins and Aspects of the Project

My research has arisen from a personal curiosity about the way illusionism functions within the encased contemporary art diorama, which hereafter I also refer to simply as the diorama. My interest was initially spurred by looking at photographs of encased contemporary art dioramas, and later heightened by seeing actual examples of such dioramas. Being a visual artist and maker of animated films, I was curious about the possibility of enhancing illusionism within encased contemporary art dioramas through the strategic integration of animated film. For example, I looked at a photograph of Charles Matton's encased contemporary art diorama *The Large Loft, 26th Street, New York* (Fig.25*)* and pondered the possibility of replacing the static photographic image of the heritage skyscraper, seen through the rear window of the loft, with an animated film shown on a screen. I imagined the animated possibilities of a plane appearing to fly over the top of the skyscraper, or lights seeming to be switched on one by one within the skyscraper windows, as night time fell and the blue patch of sky above darkened and began to sparkle with twinkling stars.

The practical component of my research has involved three main phases. The first phase involved making encased contemporary art dioramas, which had no animation within them. I

considered this to be the best practical means to address the question: How does illusionism function within the encased contemporary art diorama? It also allowed me to familiarize myself with the miniature artificial environment into which I intended to introduce screen-based animated film. The first phase involved determining the subject matter for each of the dioramas and the type of encasement and viewing portals I would use. This also involved gathering the required materials, arranging and assembling the modelled three-dimensional components within the diorama, and then lighting them.

The second phase involved making animated films. As part of my methodology, prior to making screen-based animated films to be fitted into encased contemporary art dioramas, I made a series of short animated films designed to be viewed as stand-alone animated films in their own right. These were made to be viewed in ordinary conditions on a typical rectangular television screen. Some of these animated films have been included in the final exhibition. They have provided me with a means of contrasting the qualities of animated film made for ordinary viewing conditions, against those of animated films specifically made to be integrated into encased contemporary art dioramas.

The third phase of my research involved making encased contemporary art dioramas with screen-based animated film integrated into them. The more readily apparent challenges associated with the third phase of my practice led research were centred upon the incongruous and seemingly incompatible nature of the encased contemporary art diorama, as compared to screen-based animated film. Whereas the encased contemporary art diorama is non-durational, silent, static, and three-dimensional in form; animated film is durational, conveys illusions of movement and metamorphosis, it typically has an audio component and is only two-dimensional in form.

Throughout the project I have attempted to use the most readily accessible materials and technologies available. The animated films within the dioramas are presented on flat screen televisions and played on attached domestic DVD players. The lighting of the dioramas has been undertaken using desktop lamps and small low wattage lights designed for use in kitchen cabinets.

I used a digital pen and Wacom pad in conjunction with Artrage5 image editing software, to create and manipulate digital images for inclusion in the animated film sequences. Artrage5 functions as a simplified user friendly version of the better known image editing software

Adobe Photoshop. The design functions and onscreen icons of Artrage5 are oriented towards use by visual artists, who like myself, are more accustomed to the use of traditional picture making materials and tools. Rather than use any app specific to the making of animated film, I assembled my animated films using iMovie, a filmmaking app that comes preinstalled with all Apple Macintosh computers

4.3 Inspiration and the Emergence of Themes

While my research is essentially about the merger of two contemporary illusionistic art mediums, and the practical aspects of this, recurrent artistic themes emerged as the project progressed. In keeping with contemporary art practice, I avoided the use of human figurines within my dioramas. Initially I worked with the generic theme, 'places of moment'. None of the places depicted within the dioramas that I made were of great historical significance, not in the way that historical military dioramas that depict battle scenes may be. The dioramas that I made first, those without screen-based animated film integrated into them, were about the quiet moments in everyday places, such as is depicted in my diorama *Apartment of an Aspiring Musician* (Fig.30). Some are about the fall of light at a certain time of day, or the silent resonance of absent human figures evidenced only by signs of human habitation, such as the artist's easel and painting materials in my diorama *The Basement* (Fig.34).

Sometimes I was inspired by the miniature ready-made objects that I serendipitously chanced upon while gathering materials for inclusion in the dioramas. At times a single miniature object would suggest an entire place, just as a randomly discovered segment of a jigsaw puzzle can suggest a bigger picture. For example, contemplating a pair of elegant miniature chairs suggested to me an opulent and well maintained space like that depicted in my diorama *Fantasia Ballroom* (Fig.31), while a rusted toy truck and a few small found pieces of metallic pipe, served to initiate the vision of the abandoned and corroded interior of my diorama *Creswick Mineral Spring Company* (Fig.32).

I was also inspired by my lived embodied experiences of the life-sized world. Like the character in my short animated film, *Sidney Nolan Seeking Inspiration at the Old Ballarat Cemetery* (Fig.48), I too sought inspiration through the visitation of actual places. Indeed, camera in hand, I made several visits to the Old Ballarat Cemetery while making the film. Travelling to actual places, photographing them, and then attempting to convey aspects of my embodied experiences of such places within the confines of encased dioramas, formed part of my method. For example, to make the animation enhanced diorama *The Lake* (Fig.45), I took

several long strolls along the shores of Lake Wendouree in Ballarat. Creating the diorama, *Eureka Laneway, Ballarat* involved visiting and photographing the features of several Ballarat laneways. Creating the diorama, *The Penthouse* (Fig.33), involved a journey in an elevator to one of the highest publicly accessible spaces in Australia, the Eureka Skydeck situated on the 88th floor of Eureka Tower, in Melbourne. The long elevator journey back down from the Eureka Skydeck, along with other multiple rides in other more conveniently located elevators served to inspire my diorama *The Elevator* (Fig.43).

I was influenced by an article by Clarke and Doel which investigated the "motionless trips" enabled by 19th Century technologies such as the magic lantern, phantasmagoria, panorama, and diorama[228]. I was intrigued by the idea that in their heyday these historical out-dated technologies were "frequently employed to stimulate the transportation of the spectator not only to distant locations but also through time[229]". Although I was working with contemporary art dioramas, rather than obsolete 19th century technologies, I felt a direct relationship to Clarke and Doel's premise. I contemplated the possibility of a viewer at my exhibition, having a sense of motionless travel as they moved about the gallery space from one illusionistic dioramic destination to the next. Consequently, the idea of motionless travel constitutes a major theme in my exhibition.

I found the value of the theme of motionless travel to be heightened, when as a consequence of the Covid19 pandemic, which was at its peak for much of the time that I undertook my research, strict travel restrictions were imposed upon the broader community. For example, individuals residing in the regional city of Ballarat, in which my studio was located, were not permitted to travel to the state capital, Melbourne, without an authorised reason as this would breach the geographic borders of a law enforced 'ring of steel'. Melbourne residents were subject to local curfews. Tickets that I had purchased for an interstate flight were abruptly cancelled as Australian states and territories closed their borders and went into lockdown. My exhibition is not about Covid19, however its overall effects did influence the way I thought about my dioramas, and the themes they would convey. For me they became portals for escapism into fictional realms quarantined from the pandemic, places and spaces for myself and others to motionlessly and metaphysically retreat into for a fleeting moment of reprieve.

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[228] David, B, Clarke. Marcus, A, Doel, "Engineering Space and Time: Moving Pictures and Motionless Trips", *Journal of Historical Geography*, 31, no.1(2005): doi.org/10.1016/j.jhg.2003.08.022
[229] Ibid., 41.

A brief overview of the final exhibition is provided below, to provide further contextualisation to the application of the materials and methods discussed within this chapter.

4.4 The Exhibition

The exhibition, 'Behold the Animated Diorama!' will be staged in the Post Office Gallery at Federation University in Ballarat, Victoria, Australia. The gallery, a former public post office shopfront is a long rectangular space with several large arched windows facing onto Sturt Street. I envision that the windows will be covered and the gallery space slightly darkened, so that the strategic illumination of the interiors of the encased dioramas can be viewed to best effect. The use of a darkened gallery space correlates with the exhibition techniques used to display encased contemporary art dioramas at the *Musee Miniature et Cinema* in Lyon, France. It also harks back two hundred years to Daguerre and Bouton's use of a darkened auditorium,[230] to exhibit the original theatre-like dioramas of 1822.

There will be sixteen larger encased contemporary art dioramas, and six of these will have animated film integrated into them. The majority of the encased dioramas will be embedded within a series of temporary timber wall panels that have been painted black. The only aspect visible to the viewer will be the viewing portal into the encased dioramas. There will also be seven smaller dioramas exhibited as a group arranged upon a cluster of plinths[231]. The main purpose of the wall panels is to conceal the outer parts of the dioramas' encasements, the plinths that they are situated upon, and any technical equipment such as cabling, lighting, television screens and DVD players.

At one end of the gallery there will be a designated space in which a series of four short animated films are to be shown on two television screens[232]. Because the animated films within the dioramas, and those shown on the television screens will have audio components, the gallery will be filled with multifarious sounds of music and sound effects. It is anticipated that the typical viewer will walk around the gallery space, progressing from one diorama to the next. As they do so, any audio component associated with the nearest diorama will come to the fore.

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[230] Huhtamo, *Illusions in Motion, 144*.
[231] When the exhibition was held, there four smaller dioramas exhibited on plinths.
[232] When the exhibition was held, the stand-alone animated films were shown on a single wall-mounted television.

4.5 Making the Encasements for the Dioramas

The solid opaque encasement serves to provide a secure isolated space within which the modelled three-dimensional miniature objects and built features of the diorama can be displayed and strategically illuminated. The encasement is usually kept out of sight from the viewer, its function is pragmatic, and its appearance is of no aesthetic significance. The built form of the encasement provides a means by which to conceal items such as wiring, light bulbs and timber support braces. The encasement usually takes the form of a box. In fact, the French artist Charles Matton referred to the encased contemporary art dioramas of his making as being "*Boites*"[233], meaning boxes.

The encasement can be made of any sturdy material, however through studio experimentation I have found the use of timber fibreboard to be advantageous as it can be cut, drilled, gouged, glued and patched, while also accommodating screws and nails as required. Initially, I designed my own shoe box sized encasements and had these carpentered in medium density fibreboard (MDF). However, constructing the encasements from the ground up proved to be a time consuming diversion away from other more significant visual components of the dioramas. So, I began to experiment with the modification of larger ready-made boxes. In making the two large dioramas *Fantasia Ballroom* (Fig.31) and *The Basement* (Fig.34), I recycled and repurposed second-hand television cabinets. The encasements for most of the other dioramas took the form of modified prefabricated stackable display cabinets purchased as *ekets* from the Swedish furniture retail chain, IKEA. The display cabinets were constructed of timber particleboard sheets with a lightweight recycled honeycomb cardboard core, and proved to be sturdy yet malleable enough for my requirements.

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[233] Matton, Sylvie. *Charles Matton: Enclosures,* 19.

4.6 Situating and Constructing the Viewing Portal

Is not to see always to see from somewhere?[234]

Maurice Merleau-Ponty

The viewing portal is the opening in the encasement which allows the viewer to look into the interior of the diorama and see the arrangement of miniature three-dimensional modelled forms and features that constitute the illuminated scene within. Once I began to consider where the viewing portal should be situated within the encasement, and just what size and shape it would be, I inevitably found that I had to think of the potential viewer and what aspects of the diorama I wanted them to see. All I knew of the viewer was that like myself, they were an embodied being, and that they typically possessed similar perceptual capacities to myself. This was in keeping with Merleau-Ponty's concept of embodied perception and his statement that "my body... is my point of view upon the world,"[235] as is agreed by Searle:

> All vision is from the point of view of one's body in space and time relative to the object being perceived. The aspect under which the object is perceived is altered if one alters one's point of view.[236]

Accordingly, I could anticipate that physical mobility would allow the viewer to bring their face into close proximity to the viewing portal, to look up, down and around at the contents of the diorama. Altering their corporeal relationship to the viewing portal would also let them see the interior contents from a range of angles. According to Merleau-Ponty, "to look at an object is to inhabit it"[237], he also states that "Everything I see is within my reach, at least within the reach of my sight."[238] The size and location of the viewing portal would serve to delimit the viewer's visual access, and allow me to define the angle from which the dioramic contents were seen, and therefore identify which elements constituted the foreground, the middle ground and the background.

I experimented with a variety of viewing portal sizes and shapes, ranging from the small round peephole in *Ballarat Post Office*, to the medium sized unglazed square funnel-like viewing portals fitted to *Mount Fujiyama Five Minutes Before the Great Eruption of 1778* (Fig.38), and *The Grand Gallery* (Fig.35).

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[234] Merleau-Ponty, *Phenomenology of Perception,* 67.
[235] Ibid., 70.
[236] John, R, Searle "Las Meninas and the Paradoxes of Pictorial Representation," *Critical Enquiry*, 6, no.3 (1980):481, accessed June 16,2020, https://www.jstor.org/stable/1343104
[237] Merleau-Ponty, *Phenomenology of Perception,* 68.
[238] Merleau-Ponty, *The Primacy of Perception,* 162.

My final preference was for a large glazed viewing window situated at the front of the encasement, as it allowed the viewer a restricted, though seemingly generous range of visual access to the interior of the dioramas. In encased contemporary art dioramas depicting architectural interiors, the viewing portal often takes the form of an absent wall, such as in Charles Matton's *Bathroom II* (Fig.2).

While the viewing portals of the encased contemporary art dioramas that I saw at *Musee Miniature et Cinema* were glazed with glass, I chose to glaze my viewing portals with thin transparent plastic sheeting, cut and repurposed from large picture frames bought at a variety store. This is because I had to take into account the need for the viewer being able to hear the audio components of the animated films integrated into some of the dioramas. Had I used glass, it may have had the unfavourable effect of serving as a form of acoustic insulation. The glazing of the viewing portal was one of my final undertakings in creating each of the encased contemporary art dioramas, as I needed ongoing physical access to the interior of the diorama via the viewing portal, to complete the assemblage processes.

4.7 The Schematic Procurement of Materials and Modelled Components

With the encasement made and the viewing portal defined, the next step was to determine what I would place inside the encasement, to form in miniature, illusionistic resemblances to places found in the life-sized world. My personal artistic skill set does not extend to the sculpting of small-scaled highly detailed realistic models. So, I decided that for the greater part, I would use appropriately scaled ready-made objects, and use my skills as a visual artist to modify such objects and other various components of the dioramas as required.

Such an approach not only required the procurement of many small ready-made objects, but also involved looking at a sundry array of found objects, and through an act of imagining, determining if they could masquerade as objects other than those that they actually were. For example, holding up a tiny tree branch found on the lawn in a park, twisting it around to appraise it from various angles, so as to determine whether or not, when situated in an appropriate dioramic setting, it could momentarily be mistaken by a viewer as being a life-sized tree. In another example, which was actualised within my diorama *Fantasia Ballroom* (Fig.31), I contemplated a found pair of ceramic candle stick holders and envisioned them masquerading as a pair of Corinthian columns. It was within this act of masquerading, in pretending that one thing was actually another, that the processes of creating illusions of

resemblance within my dioramas commenced. In attempting to persuade the viewer to momentarily believe that a pair of candle stick holders were a pair of life-sized Corinthian columns, my objective was to induce the viewer into experiencing a cognitive illusion, which according to Fish involves "seeing something and taking it to be something it is not."[239]

I began to collect multiple second-hand miniature ready-made objects that had been designed to replicate the form, colour, texture and overall outward appearance of objects found in the life-sized world. My collecting led me to boot markets, garage sales, second-hand stores, opportunity shops and recycling depots. Initially there was a jumbled sense of miscellany to the miniature found objects that I collected. However, over time themes emerged, and I began to organise the objects into categories, for example rustic metallic artefacts, botanical specimens, and miniature household furniture and items (Fig.36).

I settled on collecting items of a scale of 1/12, a scale often used in commercially produced miniature objects, made for collectors of miniatures, as well as dollhouse owners. The literal meaning of 1/12 scale is that the miniature object is one twelfth of the size of the life-sized object that it is based upon.

I refrained from acquiring objects if I could not envision a way to modify their outward appearance to suit my needs. For example, certain plastic objects had glossy surfaces that made them seem as if they would be resistant to the adherence of paint. It was important for me to be able to conceal the medium that the object was made of, especially if it was unconvincingly inappropriate to the object. The conspicuous presence of plastic, metal or wood, could potentially have a dissipating effect upon the viewers perception of illusions of resemblance. For example, a small dollhouse bed moulded entirely out of shiny purple monotonal plastic, including the folded back bed sheets, the pillows and the bedhead, was in my opinion, beyond redemption through modification.

From within the various categories of collected objects, combinations of certain items would bring to mind established associations that mirrored aspects of the life-sized world. While combinations of artificial botany, actual sticks and stones suggested generic schemas associated with external environments, combinations of miniature modelled objects suggested the schemas of private household rooms and other architectural interiors. For example, the combination of a miniature bed, a set of drawers and a chair might suggest a

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[239] Fish, *Perception, Hallucination and Illusion*, 166

bedroom. According to Lopes, pictorial schemas are "conventional",[240] I found this also to be true of dioramic schemas, and in particular that of architectural interiors. For a person from a twenty first century western culture, such as myself, the mere mention of the names of various household rooms, such as kitchen, bathroom, or dining room, will bring to mind an established schema of associated objects and furnishings.

When I create a representational picture, such as a pencil drawing, I find that I can spontaneously conjure at will, within the limitations of my artistic abilities, an adequate likeness to the subject that I wish to depict. This is not the case when creating the schemas of encased contemporary art dioramas. I found that I had limited control of the objects that came my way, and that I simply had to work with whatever was available, creating scenes by combining and modifying pre-existing materials and objects as required. I often had to modify my original concept too, so as to accommodate the available ready-made objects. Gombrich refers to the processes in which artists adjust the schema to suit their needs as "schema and correction."[241] It is a process which may entail, as was my experience with working with extant miniature models, "adjusting the schema"[242] as required, so that it can be realized to best effect within the constraints of the available materials.

Whereas I have found that the creating of two-dimensional pictures often involves spontaneity and instantaneous aesthetic decisions, in contrast the creation of dioramas is a slow process requiring sustained patience. Sometimes I would find several satisfactory items that concurred with the established schema of an architectural interior, but then I would have to wait a long time until serendipity bought a missing piece or two my way. If I required a particular object, I turned my search away from the brick-and-mortar world of second-hand stores and markets, to the online realm of mail order miniature model emporiums, and auction sites such as eBay. This again required patience, as I waited for parcels to arrive by post, at times resulting in a sense of delight and at others a bemused sense of disappointment.

4.8 Assembling the Dioramas

The empty encasements provided me with an arena for creative fantasies. I would place the encasement on a table top in the studio, place two or three miniature objects within it, then sit on a chair in front of it and look in through the viewing portal. I would then begin to

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[240] Dominic Lopes, *Understanding Pictures*, 9.
[241] Ernst Gombrich, *Art and Illusion,* 99.
[242] Ibid., 99.

experiment with different ways of arranging the items, swapping them for other items, imagining potential scenes and what the background imagery might look like, or how I might light the scene to create illusionistic effect.

The miniature modelled components only made a partial contribution to the overall schema, as the schema also extended to the contextualising surrounds in which they were to be situated. In the dioramas featuring architectural interiors, I found myself working in an established pattern that suited all such dioramas, as described below.

First I would assess if any of the existing inner surfaces of the encasement could be modified for use as floors, walls or ceilings. If additional walls were required, I measured, cut and fitted sheets of medium density fibre board (MDF). Before the MDF walls were secured in place with glue and wooden braces, I would cut appropriately sized and shaped holes to be fitted with architectural features such as door frames and windows.

Once the architectural form and features were in place, I modified the appearance of the vertical and horizontal surfaces to align them with the schema. I used Artrage5 software to resize and modify digital photographs and found imagery of wallpaper patterns, floor coverings, cement floors and other hard surfaces such as masonry. The digital images were then printed onto card or paper, which in turned served to function as miniature versions of the original materials that they were based upon. For example, in *Fantasia Ballroom* (Fig.31) I resurfaced the ballroom floor by printing a parquetry pattern on gloss card, cutting it and then gluing it in place, while the painted walls were decorated with a frieze pattern printed on matte paper. In *Apartment of an Aspiring Musician* (Fig.30), the walls were decorated with a wallpaper pattern that I digitally modified to make it appear aged and water stained, while the old linoleum floor was a modified digital image that I printed on cardboard, and then glued in place. Many of the interior surfaces were painted by hand.

Some of the timber in the diorama *Creswick Mineral Spring Company* (Fig.32) was purposefully aged by scratching and denting it, then soaking it in paint tinted water. To make the rustic corrugated tin walls, I obtained a roll of white corrugated paper, cut it into sections of a scale in keeping with that of the rusted toy trucks. I then subjected the corrugated paper sections to stress by crumpling and folding them, I tore holes in them, spray painted them silver and green, and finished with an overcoat of spray-on rust effect.

In the dioramas depicting exterior scenes, I used actual organic materials such as sand, rocks, twigs and leaves, along with plastic foliage, and fitted these elements onto hand painted bases crafted from plaster of Paris. The sky in the background either took the form of a paper printout such as in *Habitat of the Endangered Spotted Tailed Quoll* (Fig.37), or a screen-based animated film, such as in *The Lake* (Fig.45).

Once the architectural interiors, and nature inspired exteriors had been assembled, miniature objects were bought into the dioramas and placed in position. At this point the overall illusionistic resemblance to places found in the life-sized world would intensify. If there were through-views, such as the rural scene seen through the French doors at the back of *Fantasia Ballroom* (Fig.31), the visible area would be fitted with miniature objects, forms and imagery that served to constitute minor secondary dioramic scenes with their own separate schemas. I would look through the viewing portal and into the diorama from every conceivable angle and continue to test the positioning and possible combinations of objects bought into the dioramas. I would also check to see if there were any unwanted glimpses into the raw undecorated outer encasement beyond. With everything placed in position, experimentation could then begin with lighting. Lighting could be atmospheric, such as in the colourful flashing lights in *Funky Fresh Discotheque* (Fig.40) or imply times of day such as in the night scene in *Pool House* (Fig.41), where the main light in the diorama emits from within a blue below ground swimming pool situated in a rear garden setting. The gloomy moonlit scene in *Habitat of the Endangered Spotted Tailed Quoll* (Fig.37) is a personal homage to the habitat diorama, a fictional journey to a polluted local natural environment in which I reflect upon Wonder's remark:

> The rapid rate of species extinction and habitat degradation during this century has meant that certain wildlife species and primordial wilderness landscapes no longer exist, except in their preserved museums state.[243]

The final task was to reinstate the glazing in the viewing portal. This served as a conceptual and physical partition that divided the time and place depicted in the miniature with the diorama, from the time and place experienced by the viewer in the life-sized world.

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[243] Karen Wonders, *Habitat Dioramas as Ecological Theatre,* 185.

4.9 My Animated Film Making Technique

The making of the animated films and their accompanying audio tracks was the most technologically complicated aspect of my practice led research. Both my animated film making techniques, and my audio production methods, involve digital processes using software and a desktop Apple Macintosh computer. As with all animated films, my animated films are constituted of multiple sequential incrementally altered images, which when viewed in rapid succession create, as a consequence of the persistence of vision, visual illusions of metamorphosis and movement.

The hundreds of static images, which constitute my animated films are digital JPEG files, that I created using a Wacom digital pad and pen, in conjunction with Artrage5 digital drawing software. The digital pen and pad allowed me to draw and paint in ways that emulated the use of traditional picture making mediums, however the tools and mediums were virtual. I created each image on a specified rectangular portion of the screen which served as the digital picture canvas. Unlike traditional picture making methods, I never actually touched the resulting on-screen digital images that formed the static JPEG files. For the entire duration of the filmmaking process the static images remained immaterial on-screen digital files.

The digital picture making tools, such as brushes and pens were represented by on-screen icons, which I controlled with the use of set commands, the tip of my digital pen, or the pointer on my computer mouse. The painting and drawing mediums were also digital in form, and I manipulated their application to the virtual canvas with the use of virtual picture making tools. I was also able to import digital photographs into the programme and modify their appearance as required, for example in making the animated film *Melba* (Fig.46), I digitally cut, pasted and collaged portions of old photographs and postcards.

Like in the better known software programme Adobe Photoshop, during the creative process the digital images were composed of virtual layers situated one on top of another. This essentially meant that the foreground imagery could be manipulated, while the background image stayed the same, a quality that is advantageous to the making of animated films, and akin to the historic processes used in cel animation.

The making of multiple minute incremental alterations to the static digital images was a slow time consuming process that required preplanning and sustained concentration. The process

also involved the use of highly repetitive actions. At times complex multiple incremental alterations in the positioning of pictorial components within a single image were required, such as in the populous images of The Space Control Centre in my animated film *Luna Lullaby* (Fig.47), where there were numerous characters simultaneously moving about the screen.

I took care in the naming, numbering, and ordering of the individual images, so that they remained in a legible consecutive sequence. This is because the visual alterations between one static image and the next were often way too subtle to readily discern with the eye. The static digital images were then imported in consecutive sequence into iMovie**.** Whereas commercially produced animation is composed of approximately 24 static images per second, I only use three images per second. Consequently, the resulting movement and sequences of metamorphosis within my work appears slightly stilted, however I find the effect to be a visually pleasing and recognisable trait of my animated films. Once I had assembled all the images in a virtual queue within the programme, I clicked the iMovie export icon, and a matter of minutes later the multiple images were processed and converted into a silent digital movie file. I then stored away the digital movie files that I created, so that they could later be edited together once the audio components had been recorded. At this stage, I also filmed live footage of Lake Wendouree, to be used in a hybrid mix of animation and live action-footage in my diorama *The Lake* (Fig.45).

I edited the audio components using Pro Logic, a digital music recording and editing programme that layers one audio track upon another. For example, a rhythm drum track may be overlaid with a piano track, and in turn this may have a vocal track overlaid upon it. I composed and recorded all of the music used in the animated films. I played the music on a synthesiser keyboard, which emulated the sounds of a variety of instruments, including the drums, the violin, the harp and the piano. I sang the lyrics into a microphone directly connected to the computer. Pro Logic facilitated the use of audio mixing effects such as echo and pitch. In addition to my own music, I used pre-recorded sound effects and digital musical samples, some of which were retrieved from the BBC Sound Effects[244] archive. To create the soundtracks for the animated films, I edited my music, spoken word and sound effects together; they were then exported from the computer as a digital music file, and stored for

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[244] British Broadcasting Corporation Sound Effects, (BBC website), accessed June 16, 2022, https://sound-effects.bbcrewind.co.uk/search

later use. During the process, I reflected upon the fact that at one point in his life, my grandfather was a professional musician, who had played his violin in Australian cinemas during the silent film era.

In the next production step, I returned to iMovie to undertake the post-production phase of filmmaking. I imported the various digital movie file sequences as required, and edited them together, in a way similar to the way that sequences of live-action footage are edited together to form a coherent narrative. iMovie facilitated the use of post-production effects, such as the cropping of edges, panning across a scene, and zooming in or out. An example of zooming out, may be seen in the opening sequence of my animated film *Sidney Nolan Seeking Inspiration in the Old Ballarat Cemetery* (Fig.48), when the implied camera seems to slowly pull back to reveal a wide shot scene of the entire cemetery. At times I also used chroma key post-production techniques to alter the appearance of animation sequences by superimposing animation effects upon them. Examples include the aged film effect in *Melba* (Fig.46) and the animated rainfall and metamorphic sunset superimposed over the hybrid live-action and animated film integrated into my diorama *The Lake* (Fig.45).

The digital audio track was then imported into iMovie to underscore the silent digital movie files. Through ongoing editing processes, I then ensured that any sound effects were synchronised with their related animated imagery, to create illusions of audio attribution. For example, the loud sound effect of a blast when the rocket leaves the launch pad in *Luna Lullaby* was synchronised to make it seem to the viewer, that it was the rocket that created the explosive noise.

In a process which I repeated for each animated film, the final digital film sequences and accompanying audio components were then imported into iMovie. The completed animated film was then generated and exported to the computer desktop. I then burnt the final animated film onto a DVD, so that it could be played onto a television screen using a domestic DVD player. Four of the animated films were made to be viewed in ordinary conditions, on a regular television screen, as stand-alone animated films in their own right. Six of the animated films that I made were specifically created and designed to be integrated into encased contemporary art dioramas, as discussed below.

4.10 The Four Stand-Alone Animated Films

I made four stand-alone animated films that were not created to be integrated into encased contemporary art dioramas, and simply viewed as animated films in their own right. While making these four animated films I allowed myself complete artistic freedom and the unrestricted use of a broad gamut of features typically associated with animated films such as characters, narrative, plot development, editing processes that jumped from scene to scene, and a variety of implied viewpoints.

The longest of these four films is the musical fantasy *Luna Lullaby*, which featured bold lime green opening titles that imitated the opening credits of science fiction films of the 1950s. The plot centred around the idea that the moon, an anthropomorphised celestial being, was found to be suffering from insomnia. In response, an Australian space rocket crewed by musical astronauts and a live cargo of sheep, was sent up to the moon to perform a Luna Lullaby, especially composed to help lull the Moon to sleep, while it counted leaping sheep. The audio components is a mix of synchronized sci-fi sound effects, and the music of the lullaby. The film was inspired in part by the reverie I experienced while gazing up to the actual moon around the time of the fiftieth anniversary of the original 1969 lunar landings. The film also has personal significance, as my father had worked on the rockets at the Woomera Rocket Range, while in the Royal Australian Air Force during the 1950s. The idea that the viewer would be taken on a fantasy journey to the moon, along with the other places depicted within the film, is in keeping with my artistic theme of motionless travel.

My short animated film, *Sidney Nolan Seeking Inspiration in the Old Ballarat Cemetery* (Fig.48), arose from my personal intrigue regarding the fact that in 1943, the acclaimed Australian painter Sidney Nolan (1917-1992) had painted a picture titled *Ballarat Cemetery* (Fig.49). The film is an imaginary recreation of his visit to the cemetery, and his finding of inspiration there.

Another short animated film, *Melba* (Fig.46), centres on a local folkloric tale that the legendary early 20th century Australian opera singer, Dame Nellie Melba had once sung from a balcony at Craig's Royal Hotel in Lydiard Street, Ballarat. The hotel was visible from my studio window, however I could not find any photographic or journalistic documentation of the supposed event, so I decided to create my own filmic version. I wanted the viewer to motionlessly travel back in time, so I digitally collaged, montaged and reanimated old photographic images. I overlaid the resulting animated film with an aged film effect; I liked

the way that it partially obscured the vision of Melba and her surrounds, allowing the unconfirmed anecdote to retain a thin veil of mystery. The only audio component was the continuous mechanical purr of a movie projector, as I did not wish to misrepresent the actual opera singer or infringe upon copyright.

My abstract animated film *Spherical Visual Music* reflected the complete artistic freedom that I had afforded myself in making the stand-alone animated films. Its creation was in keeping with the animation genre visual music, as pioneered in the early 1920s by modernist artists such as Hans Richter and Viking Eggeling. Its abstract nature functions as a point of contrast to the realism required in the making of most of the animated films designed for inclusion within dioramas, as discussed below.

4.11 Making the Integrated Animated Films

The technical process of making the animated films created to go into the dioramas was the same as that of the stand-alone animated films. However, unlike the stand-alone animated films, they were made with the intention that the viewer would only see a predetermined portion of the television screen, rather than the entire rectangular surface, as is the usual practice. I began to think of the animated films created to go into the dioramas, as being animated film components, rather than complete stand-alone artworks in their own right. Like the individual miniature objects and the modelled surfaces within the diorama, the integrated animated film components also had to fit into, and contribute to, the overall schema of the diorama.

Concerns regarding visual and conceptual continuity influenced both the contents, and the visual qualities of the animated film components. In addition to contributing to the schema of the diorama, the animated film components also had to have visual qualities that correlated with those of the three-dimensional components of the diorama. This was necessary to facilitate the seamless integration of the films and ensure that they appeared to be both visually and conceptually continuous with the rest of the diorama.

It also meant ensuring that the images of the objects appearing within the animated film component were of a scale and pictorial style that was in keeping with that of the three-dimensional forms arranged within the diorama. I also had to consider how the screen that they were shown on would physically interface with the other built components in the diorama.

4.12 Integrating Television Screens and Animated Films

I designed six encased contemporary art dioramas to have screen-based animated film integrated into them, so accordingly I created six animated films to fulfil this purpose. These dioramas were *The Penthouse* (Fig.33), *The Lake* (Fig.45), *Funky Fresh Discotheque* (Fig.40), *Spaceship to Earth* (Fig.42), *The Elevator* (Fig.43) and *Creswick Eruption* (Fig.39). Before I could make each of the animated films, I first had to determine exactly how I would physically incorporate the television screen into the constructed form of the diorama. I considered Merleau-Ponty's remarks on embodied visual perception:

> For each object, as for each picture in an art gallery, there is an optimum distance from which it requires it to be seen, a direction viewed from which it vouchsafes most of itself: at a shorter or greater distance we have merely a perception blurred through excess or deficiency.[245]

Accordingly, I wanted the television screen to be located in a position within the diorama where it would be seen to best effect. This ruled out oblique angles, which could result in the distortion of the animated images. I also wanted to be able to conceal the square edges of the television screens, so as to suppress the viewer's awareness of the screen surface.

I reflected on the use of static painted imagery in examples of historical dioramas, and in particular habitat dioramas, such as *Gorilla* (Fig.21) and *Alaska Brown Bear*, at the American Museum of Natural History, in New York. In these and most other examples of historical dioramas, the static painted imagery is located at the back recesses of the diorama, providing a pictorial backdrop against which the built, modelled or taxidermied components are viewed. It immediately seemed logical to adopt this established and proven design paradigm, but in miniature, with the static painted rear image replaced by an animated film shown on a television screen. The idea that the viewer would look through the arrangement of built and modelled components of the diorama to the animated film component situated at the back, was in keeping with the original meaning of the term diorama, as coined by Daguerre. As mentioned earlier, according to Kamps the term diorama, is derived from the "Greek dia *(through)* and horama *(to see)*", meaning to see through.[246]

My method of testing this potential arrangement, was to position miniature three-dimensional components inside an empty encasement with a large opening at the back, and then to sit in front of it and look through the three-dimensional dioramic contents, to an animated film

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[245] Merleau-Ponty, *The Phenomenology of Perception,* 302.
[246] Toby Kamps, *Small World,* 6.

shown on a television screen situated behind the encasement. This proved to be a satisfactory arrangement. I decided that the flat surface of each television screen would be situated parallel to the glazing of the viewing portal.

A significant advantage of the arrangement was that the television did not have to be permanently built into the diorama, it simply sat on a bench behind it. Given the fallibility of technology, this meant that the television could be replaced at any time if required. It also meant I could adjust the positioning of the television screen, moving it back and forth, so as to ensure that the portion of the television screen visible through the diorama, was coordinated to best effect with the physical components within the diorama.

Once the basic structural format of the encased contemporary art dioramas that were to have animated film integrated into them was established, I could then devise the way that the television screen would be discreetly integrated into the overall schema of individual dioramas. Apart from inclusion of the screen, the process of creating schematic arrangements of miniature modelled forms and modified surfaces was the same for both the dioramas that had animated film integrated into them and those that did not. The processes of lighting the scene within the dioramas that contained television screens required extra caution to ensure that bright light did not reflect off the glass surface of the screen in a way that would make the viewer overly aware of the screen's presence, and therefore facilitate the dissipation of illusions.

Within the dioramas that featured architectural interiors, I was able to reveal the wanted part of the screen in the openings of built-in structural through-views, such as doors and windows. In the exterior scene diorama *Creswick Eruption* (Fig. 39), I was able to use an opening between organic forms, such as trees and branches, to reveal the part of the screen that I wanted the viewer to see; that being a photograph that I took of Springmount in Creswick, reanimated so as to appear to undergo a volcanic eruption. By using these means, I was able to conceal some of the giveaway signs of the screen's presence, by hiding its edges and the overall built form of the television set.

In *The Penthouse* (Fig.33), a large glass window situated at the back of the high-rise apartment depicted in the diorama, reveals a portion of screen upon which a reanimated version of a photograph that I took from the Eureka Skydeck is shown. The edge of the window serves to conceal the outer portions of the screen, while at the same time revealing to

the viewer the portion of the screen that I wanted them to see. The animated high-rise view undergoes a cyclical metamorphic series of transitions from night to dawn, from daytime to dusk, then back to night. The elevated view contextualises the depicted room with its stylish furnishings as being a penthouse, and assists in fulfilling the schema implied by the title of the piece.

A portion of screen showing a twirling pattern of coloured dots, representative of a dance floor is glimpsed through a door in the rear of my diorama *Funky Fresh Discotheque* (Fig.40). It serves in conjunction with the accompanying audio track of dance music, to fulfill the schema of a discotheque. In this instance, it is the built form which contextualised the animated film component, as when the animated film components of twirling dots is viewed in isolation, it appears to be abstract.

An accidental significant moment in the development of my use of animated film within the dioramas occurred while viewing unedited live-action video footage of Lake Wendouree on a television screen positioned behind the encasement for *The Lake* (Fig.45). While filming I had held the camera in a fixed position, however at the end of the sequence the camera had tilted forward while still on. When this showed up on the television screen within the diorama, I momentarily experienced the unexpected sensation that the diorama had lurched forward, as if it had started to fall. It was only then that I realised that I could create illusions that the diorama was moving in relation to the images in the animated film sequences. This accidental discovery resulted in me making the animation enhanced dioramas *Spaceship to Earth* (Fig.42) and *The Elevator* (Fig.43).

In the diorama *Spaceship to Earth* (Fig.42) , a window situated at the front of a dioramic depiction of a spaceship interior, looks out into deep space, as represented by an animated film. The animated film sequence implies that the diorama is moving forward through space, passing various obstacles such as meteors and so called 'space junk' as it advances. The diorama is thematically linked to the notion of motionless travel, and my stand-alone animated film *Luna Lullaby*.

The Elevator (Fig. 43) is the dioramic depiction of the interior of a modern elevator. The doors at the rear of the elevator are an animated film sequence. A transitory glimmer of light seen between the closed doors implies that the elevator is going either up, or down. The elevator doors open and close to reveal a series of mystical floors, some of which are places

depicted in other dioramas that I made. The elevator's journey from floor to floor, from diorama to diorama, serves to fulfil the theme of motionless travel, while also linking and binding together the other dioramas in the exhibition.

Fig. 30
Kenneth Kronberger, *Apartment of an Aspiring Musician,* 2022, diorama,
digital print, timber, paint, artificial botany, acrylic paint, 31.8 x 31.8 x 85 cm

Fig. 31
Kenneth Kronberger, *Fantasia Ballroom*, 2022, diorama,
MDF, paint, digital print, found objects, artificial botany, digital print,
37 x 77 x 95 cm

Fig. 32
Kenneth Kronberger, *Creswick Mineral Spring Company,* 2022, diorama with two sections,
corrugated paper, rust effect spray, enamel paint, straw, glass, sawdust, found objects,
40 x 40 x 85 cm sections

Fig. 33
Kenneth Kronberger, *The Penthouse*, 2021, diorama,
plastic, found objects, digital print, foam board,
screen-based animated film, 31.8 x 31.8 x 35 cm
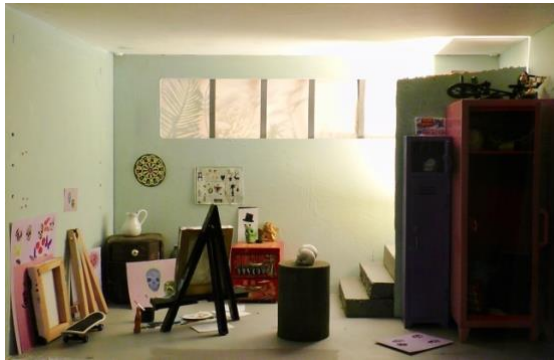
Fig. 34
Kenneth Kronberger, *The Basement*, 2021, diorama, acrylic paint,
wood, found objects, clay, glitter, 34 x 58 x 48 cm

Fig. 35
Kenneth Kronberger, *The Grand Gallery,* 2022, diorama, paper, found objects,
12 x 14 x 14 cm

Fig. 36
Botanical specimens and miniature household items collected for use in dioramas.
Photograph, Kenneth Kronberger.

Fig. 37
Kenneth Kronberger, *Habitat of the Endangered Spotted Tailed Quoll,* 2022,
diorama, plaster, artificial foliage, tree branches, acrylic paint, cotton fabric,
clay, digital print, 40 x 40 x 40 cm

Fig. 38
Kenneth Kronberger, *Mount Fujiyama, Five Minutes Before the Great
Eruption of 1778,* 2020, diorama, plaster, acrylic paint, found
objects, digital print, 12 x 14 x 14 cm

Fig. 39
Kenneth Kronberger, *Creswick Eruption,* 2022, plaster, wire, tree branches, plastic
foliage, screen-based animation, 30 x 50 x 70 cm

Fig. 40
Kenneth Kronberger *Funky Fresh Discotheque*, 2021, cardboard, digital print,
plastic, mirror ball, found objects, screen-based animation, 31.8 x 31.8 x 35 cm

Fig. 41
Kenneth Kronberger, *Pool House*, 2022, digital print, acrylic paint, found objects, glass,
artificial botany, 31.8 x 31.8 x 75 cm

90
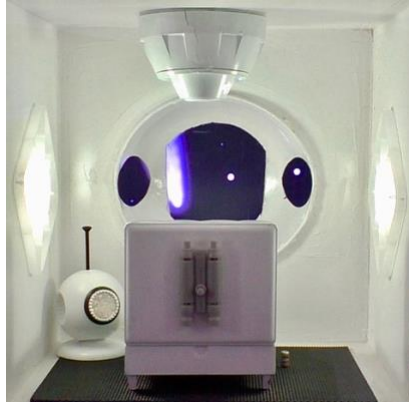
Fig. 42
Kenneth Kronberger *Spaceship to Earth,* 2022, acrylic paint,
found objects, screen-based animation, 31.8 x 31.8 x 40 cm

Fig. 43
Kenneth Kronberger, *The Elevator*, 2022, diorama, digital print,
found objects, screen-based animation, 31.8 x 31.8 x 35 cm

Fig. 44
Kenneth Kronberger, *Mystery Cave, Mt Buninyong,* 2022, diorama, plaster of Paris,
acrylic paint, dowelling, chicken wire, plastic box, 70 x 50 x 65 cm
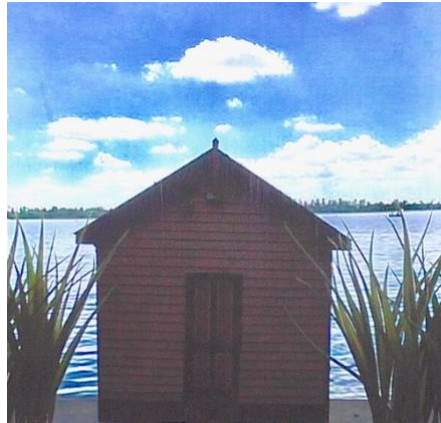
Fig. 45
Kenneth Kronberger, *The Lake,* 2021, diorama, digital print, acetate, wood, found objects,
screen-based animation, 31.8 x 31.8 x 35 cm

Fig. 46
Kenneth Kronberger, *Melba, 2021*, animated film still.
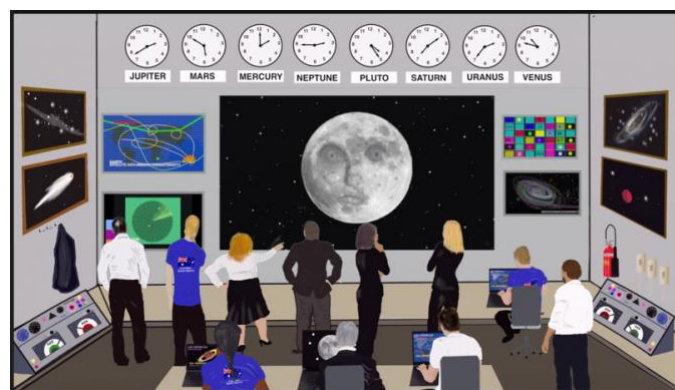
Fig. 47
Kenneth Kronberger, *Luna Lullaby, 2019-22,* animated film still.

Fig. 48
Kenneth Kronberger, 2019, *Sidney Nolan Seeking Inspiration in the Old Ballarat Cemetery,* animated film still.
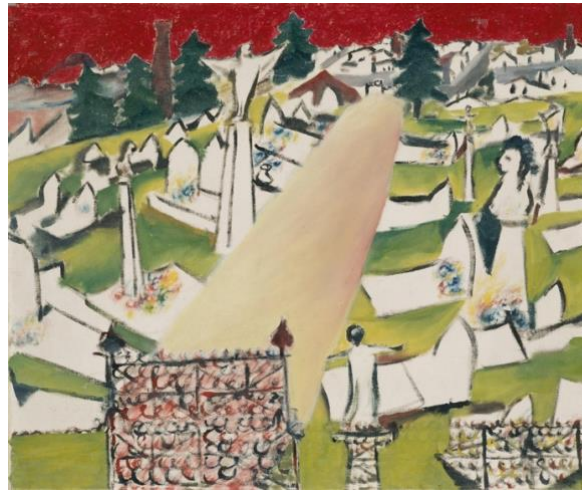
Fig. 49
Sidney Nolan, *Ballarat Cemetery*, 1943, enamel paint on canvas, 64 x 76.5 cm.
National Gallery of Victoria, Melbourne.

Fig. 50
Andrea Pozzo, *Painted ceiling in the Church of St Ignazio,* 1685. Detail.

Chapter Five

Findings

5.1 Introduction

My findings are based upon direct observations that I made while in my studio, making animated films and creating encased contemporary art dioramas, some of which had screen-based animated film integrated into them. In keeping with the conceptual framework outlined in Chapter One, I also use concepts originally developed for the discussion of illusionism within representational pictures as paradigms for my discussion about illusionism within the encased contemporary art diorama. These concepts include veridical and non-veridical perception, twofoldness, seeing-in or seeing-as, realism, trompe l'oeil effect, occlusion and the absence or presence of motion parallax. Consideration is also given to the implications of Merleau-Ponty's concept of embodied perception, and I draw on Fish's writing on the subject of illusions and perception, to assist in the identification of different illusion types.

5.2 The Nature of the Illusion: Suspended at the Threshold of Immersion

I have given much consideration to the nature of the main overall illusion experienced by the viewer when they look into an encased contemporary art diorama. While it may well be described as fleeting or momentary in duration, that does not account for the experiential nature of the illusion. I do not consider it to be an illusion of immersion, as may possibly be achieved through engagement with virtual reality technologies. Instead, I think of the main overall illusion associated with the encased contemporary art diorama as being an illusion of being suspended at the threshold of immersion.

The viewer has visual access to the diorama's interior, however the depicted scene within the diorama never surrounds them in the way that a person actually standing in the middle of a room is surrounded by its walls, floors and ceiling. The viewer is not immersed in the depicted scene, instead they are suspended at the threshold of entering the depicted scene. They may even think of the depicted scene as being a place that they are imminently about to step foot into. This process may involve preplanning how they will navigate the physical space, deciding which features to move towards, and which features to avoid. The viewer may contemplate how they would interact with any furniture they can see, or how to make their way into secondary spaces through openings, such as the French doors at the rear of my

diorama *Fantasia Ballroom* (Fig.31)*,* or the tunnel-like entrance to my diorama *Mystery Cave, Mt Buninyong* (Fig.43).

In many ways the illusion of being suspended at the threshold of immersion resembled the actual embodied experience of standing outside a shop or café on a street in the real life-sized world and looking in through the front window. In this familiar scenario, we may briefly, even just vaguely consider how we might navigate the interior space, where we would stand if we did enter, what we would focus our attention upon and move towards. So too it is when standing before an encased diorama, we find ourselves suspended at the threshold of immersion.

It is in those unguarded moments, when the viewer fleetingly disengages with the fact that the depicted scene is rendered in the miniature, when they begin to plan how they would physically navigate the space and interact with the possibilities it offers, that the illusion is at its zenith.

5.3 The Main Overall Illusion and Minor Contributory Illusions

I have found that the illusionism within encased contemporary art dioramas occurs on two levels. First there is the main overall illusion, which involves an all-encompassing illusionistic impression that the diorama depicts a particular scene. Secondly there are minor contributory illusions, the collective harmonious sum of which results in formation of the main overall illusion. For example, the contents of my encased contemporary art diorama, *Mystery Cave, Mt Buninyong* (Fig.43) may momentarily be perceived by the viewer as being an actual cave, the misperception that it is a cave, is the main overall illusion. The main overall illusion that the diorama is an actual cave is constituted of several minor contributory illusions. Examples of minor contributory illusions include the non-veridical perception that recently made plaster of Paris stalactites and stalagmites are in fact ancient geological formations, and that the lamp light shining in the cave entrance is actually light from the sun.

The viewer's perception of the main overall illusion is typically affirmed and reinforced by the title of the diorama, as is the case for example in relation to Nix and Gerber's *Beauty Shop* (Fig.3), Charles Matton's *Bathroom II* (Fig.2) and my encased diorama *Habitat of the Endangered Spotted Quoll* (Fig.37). Any perception that an encased contemporary art diorama contained an actual place would be classified as a cognitive

illusion, because it would involve the viewer "seeing something and taking it to be something it is not."[247]

The main overall illusion that the scene depicted within the diorama is actual, can only fully function if the minor contributory illusions are effective and harmoniously work together to form a cohesive scene. The malfunction of an intended minor contributory illusion can detract from the effectiveness of the main overall illusion. For example, if a chair of a size noticeably larger than the 1:12 scale that I used in *Fantasia Ballroom* (Fig.31)*,* was placed within that particular diorama, it would be discordantly disproportionate to other items within the diorama and have a disruptive effect on the verisimilitude of the main overall illusion. Likewise, if one of the decorative mirrors placed above the French doors within the same diorama were to reflect back the viewer's seemingly huge face and eye, this would only serve to remind the embodied viewer of the impossibility of them ever physically entering the diorama, as its miniature scale is disproportionate to the life-sized scale of their body.

5.4 Twofoldness: Veridical and Non-Veridical Perception

As outlined in The Conceptual Framework, when experiencing veridical perception, we see things as they actually are, however when we experience non-veridical perception, we see things as they are not. Consequently, non-veridical perception is associated with the perception of illusions, as stated by Newall, "… pictorial experience involves the non-veridical experience of seeing the picture's subject matter."[248]

Twofoldness is a phenomenon that acquires its name from the two aspects of our perceptual experience when we look at representational pictures. One aspect of the experience is veridical, and the other is non-veridical and "entails illusion."[249] Lopes states that "We experience pictures as two-dimensional designed surfaces, but we also experience them as their subjects."[250] Wollheim describes the same phenomenon in terms of "seeing the medium versus seeing the object,"[251] a description that suggests that the concept of twofoldness is also readily applicable to the contemporary art diorama, which is typically a mixed medium composition.

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[247] Fish, *Perception, Hallucination and Illusion,* 166.
[248] Michael Newall, *Pictorial Experience and Seeing*, 129.
[249] Ibid., 134.
[250] Dominic Lopes, *Understanding Pictures*, 40.
[251] Richard Wollheim, *Art and its Objects*, 213.

Accordingly, a viewer could look into one of my dioramas, for example *Creswick Mineral Springs Company* (Fig.32) and have a two-folded perceptual experience. In accordance with the concept, one aspect of the experience would involve the viewer having veridical perception, and seeing the actual mediums and the materials that I used to create the diorama: old rusted toy trucks, spray painted corrugated paper, wood off-cuts, scrap metal, straw, paper printouts and acrylic paint. The other aspect of the experience, which is the result of my applied use of artifice, would entail the viewer momentarily experiencing the non-veridical perception of seeing the diorama as containing the worksite of an old minerals spring, replete with rusted machinery, and old weather worn trucks parked in a large old dilapidated shed constructed of timber beams and rusted corrugated tin.

5.5 Disruptive Telltale Signs Arising from Human Embodiment

The illusion that the scene depicted within the encased contemporary art diorama is actual, can be disrupted by tell-tale signs arising from human embodiment. The most conspicuous of these is the fact that the life-sized proportions of the viewer's body are disproportionate to the miniature scale of the depicted scene, and that it is physically impossible for the viewer to ever enter the confines of the encased contemporary art diorama.

However, there are more discreet tell-tale signs arising from visual factors that are contrary to the viewer's life experience as an embodied being. Merleau-Ponty has written of how the appearance of objects can alter as we adjust our corporeal relationship to them. He writes:

> For example, I see the next-door house from a certain angle, but it would be seen differently from the right bank of the Seine, or from the inside, or again from an aeroplane...[252]

Part of my understanding of Merleau-Ponty's theory of human embodiment is that we accept illusionistic variations in the appearance of objects as we alter our physical relationship to them, because our life experience as embodied beings has taught us how to account for such variations. He has written, for example, about how the perceived image of a square set out on a flat surface, such as a tabletop, alters as we change our bodily relationship to it. When viewed obliquely the image of a square appears as "roughly diamond-shaped"[253], however when "we keep the orientation in mind,"[254] we account for the illusion.

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[252] Merleau-Ponty, *Phenomenology of Perception, 67*
[253] Ibid., 300.
[254] Ibid., 300.

While standing and looking in at my encased contemporary art diorama *Apartment of an Aspiring Musician* (Fig.30), it occurred to me that the only reasons a bed would appear to be so small to me in a real-life situation, was either because it was actually tiny, or because it was far away from me. In keeping with the rules of linear perspective, distant objects appear to be smaller than those that are near. However, if the bed was far away from me, how was it possible that I could see the fine detail so clearly? And also, if it was far away from me, why was there no middle ground to account for its distancing? These conflicting factors did not correlate with my embodied life experiences of the world, and in the end the more logical deduction that the bed was both small and in close proximity to me, won over.

Such disruptive telltale signs, arising from conflict with the viewer's embodied experience of the life-sized world, are recurrent in most encased contemporary art dioramas. Judging from my experience, there is no apparent remedy, other than to invest more time and effort into those factors which may otherwise assist in convincing the viewer that the depicted scene is real. Insight into exactly what such factors might be, can be gleaned from Newall's following remark about realism in pictures:

> Information theories hold that it is the information a picture conveys about its subject matter that determines its degree of realism. In their most straightforward form, these theories hold that the more properties a picture depicts its subject as having – the more details of shape, colour, texture and so on that it depicts – the more realistic it will be.[255]

However, not all telltale signs arising from embodied perception result in diminishment of the likelihood of a viewer perceiving convincing illusions of mimetic resemblance to actual life-sized places. Occlusion, motion parallax and stereoscopic vision are all visual depth cues, that occur within the three-dimensional realm of the encased contemporary art diorama, in ways that are identical to the realm of the actual life-sized world. The artist does not need to do anything to induce these perceptions, they are fundamental to the phenomenology of embodied perception.

Occlusion, also known as interposition, is a depth cue that arises from the fact that "in the real world", if one object is directly in front of another it will occlude some part of it[256], as stated by Merleau-Ponty, "objects form a system in which one cannot show itself without concealing others."[257] Nearer objects partially block the viewer's visual perception of items

[255] Michael Newall, *Painting and Philosophy*, 227.
[256] William Dunning, *Changing Images of Pictorial Space; A History of Spatial Illusion in* Painting (New York: Syracuse University press, 1991), 222.
[257] Maurice Merleau-Ponty, *The Phenomenology of Perception*, 68.

situated further away, for example the stalactites in the foreground of my diorama *Mystery Cave, Mt Buninyong* (Fig.43), partially obscure the stalactites at the rear of the cave, and therefore create a sense of spatial depth.

Motion parallax refers to the ways in which, as we move through the real world and the space within it, we perceive apparent shifts in the spatial relationships of the physical objects within our visual field. As we move in one direction, the nearer objects will be perceived as moving in a direction opposite to that in which we are travelling, the nearer objects will also appear to be moving at a faster rate than those that are more distant[258]. For example, as the viewer moves their head about while looking in my diorama *The Pool House* (Fig.41), the apparent physical relationship between the sofa, coffee table and lamp in the foreground will appear to shift, while the view to the pool in the background remains relatively stable.

Stereoscopic vision, also known as binocularity, is a physiological perceptual phenomenon which arises from the biological fact that, in most instances, we as viewers have two eyes. As our eyes are set apart, they do not receive the exact same view of a scene.[259] When the two slightly different views are merged and processed in the brain, the result is three-dimensional vision, which allows us to judge spatial qualities such as form and distance.

Stereoscopic vision allows the viewer of the encased contemporary art diorama to visually perceive its three-dimensional qualities, without the need for touch. Like occlusion and motion parallax, stereoscopic vision concurs with the way we view the real life-sized world, and thereby reinforces perceptions of mimetic resemblance.

5.6 Seeing-in Versus Seeing-as

Seeing-in and seeing-as theory is closely related to twofoldness. It is a term used in contemporary philosophical discourse to analyse the nature of our non-veridical perception of the subject matter depicted in representational pictures. The term was coined by Richard Wollheim:

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[258] Felix Goodson, Steven Ritter, Randy Thorpe, *"Motion Parallax in Depth Perception and Movement Perception"*, *Bulletin of the Psychonomic Society*, 12 no.5 (1978): 349, accessed October 12, 2021, https://link.springer.com/content/pdf/10.3758/BF03329704.pdf?pdf=button
[259] Robert Snowden, Peter Thompson, Tom Troscianko, *Basic Vision: An Introduction to Visual Perception*, second edition (Oxford: Oxford University Press, 2011), 206.

> I now think that representational seeing should be understood as involving, and therefore best elucidated through, not seeing-as, but another phenomenon closely related to it which I call 'seeing-in'.[260]

Within the discourse seeing-in is often described as a perceptual process analogous to seeing figures in a cloud, it is an explanatory analogy referred to in text by Newall[261], Lopes[262] and Tullman.[263] It is my belief that in most representational pictures, we do discern the image in the medium, in ways that resemble the way that figures may be seen in a cloud.

However, this is not the case when viewing the encased contemporary art diorama, the viewer does not undertake a process in which they discern the image within the medium, instead they immediately see the three-dimensional form as being the actual object. This is because when creating encased contemporary art dioramas, the artist strives to suppress the viewer's awareness of the medium, so that the viewer sees the depicted object prior to making any attempt to diagnose the medium in which it is portrayed. For example, a viewer seeing a miniature chair inside my diorama *Fantasia Ballroom* (Fig.31) does not first see the timber, cotton and paint that the chair is made from, and then discern the image of a chair within the medium. Instead, the viewer first sees the chair, and only later, if interested, identifies the medium.

So, in summary illusionism in viewing most picture types, other than trompe l'oeil works,[264] involves the viewer first seeing the medium, be it a photograph, painting or drawing, and then secondly discerning the images within it, via a process of seeing-in. By contrast, when looking into an encased contemporary art diorama, the viewer sees the depiction prior to discerning the medium, accordingly the visual process is one of seeing-as, rather than seeing-in. This demonstrates a small but significant difference between the way illusionism functions in most pictures, as compared to illusionism within the encased contemporary art diorama.

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[260] Richard Wollheim, *Art and its Objects*, 209.

[261] Michael Newall, "Is Seeing-in a Transparency Effect", *British Journal of Aesthetics*, 55, no. 2 (2015):132, accessed June 16, 2020, doi.org/10.1093/aesthj/ayu101

[262] Dominic Lopes, *Understanding Pictures*, 43.

[263] Katherine Tullman, "Varieties of Pictorial Illusion", *The Journal of Aesthetics and Art Criticism*, 74, no.3 (2016):271, accessed August 8, 2022, doi.org/10.1111/jaac.12285

[264] Michael Newall, "Pictorial Experience and Seeing", 133.

5.7 Quadratura Trompe L'oeil Ceiling Paintings

In trompe l'oeil paintings the artist strives to "trick the viewer into believing, if only for a moment, that what they have before them is not a picture but the depicted subject matter itself."[265] In such paintings the viewer's awareness of the medium is suppressed,[266] and as is the case in the viewing of encased contemporary art dioramas, fulfilment of the illusion of mimetic resemblance is dependent upon the viewer being situated in an appropriate predetermined viewpoint.

According to Lopes:

> In successful *trompe-l'oeil*, information about a picture's design properties is impossible or difficult to obtain. It is no accident that amongst the most effective *trompe-l'oeil* pictures are ceiling paintings such as Pozzo's decoration of the vaults of St Ignatius's Church in Rome, whose surfaces are out of easy reach.[267]

As part of my field work, I viewed Andrea Pozzo's (1642- 1709) illusionistic ceiling paintings at St Ignatius's Church in Rome (Fig.50). Standing, and looking up at the distant meticulously painted ceiling, I experienced great difficulty in discerning where the real architectural features ended and those depicted in paint commenced. In a separate part of the church, I could see a large dark ceiling dome situated over the altar. I wanted to move closer and further investigate the ceiling dome but could not access the area on account of a barrier of pews, and the sense that I would be intruding upon a small group of people carrying out a religious service that involved the lighting of many candles. When I later returned home and began to research the dome, I was genuinely shocked to find that it was not real, that it was another example of trompe l'oeil painting, by Pozzo. The experience left me convinced that in certain circumstances, trompe l'oeil paintings can indeed be seen as being the objects they depict.

Quadratura is a trompe l'oeil ceiling painting technique that incorporates the actual three-dimensional architectural components of the building housing the trompe l'oeil artwork. I find this of great interest, because the inclusion of the actual architectural elements means that three-dimensional components are used in the illusion forming process. In this way, quadratura trompe l'oeil resembles the encased contemporary art diorama, as the illusion forming artifice within such dioramas involves the use of both two- and three-dimensional forms. However, in trompe l'oeil ceiling painting, the three-dimensional components tend to

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[265] Ibid, 133.
[266] Katerina Bantinaki "Pictorial Perception as Illusion", 271.
[267] Dominic Lopes, *Understanding Pictures*, 40.

be situated in peripheral areas, whereas my studio practice has shown me, in the encased contemporary art diorama they are intermingled throughout the depicted scene.

5.8 The Function of Individual Encased Contemporary Art Diorama Components

Several components of the encased contemporary art diorama, such as light bulbs, wiring and support braces for artificial walls, are kept out of sight from the viewer by the opaque encasement. The viewing portal allows the viewer to see a limited aspect of the strategically illuminated staged vision within the encasement.

The glazing in the viewing window fulfills the practical purpose of protecting the diorama's interior from exterior interference, such as flying insects and the hands of the curious minded. The viewer may look at, but must never touch the modelled forms and surfaces in the diorama, as it would only dispel illusions by confirming any suspicions that the diorama is miniature in size. The glazing acts as a physical partition, emblematic of the psychological partition between the fictional world depicted inside the diorama, and the external actual life-sized world. It may also serve as a partition between the time depicted in the diorama, and the time in the actual world.

According to Fish, "a perfectly flat piece of glass will not create illusions,"[268] however concave lenses, such as the one I used on the small encased diorama *Lunar Surface* will create a physical illusion and alter the viewer's visual perception of the scene. According to Fish:

> The central example of physical illusions are those in which an object looks to be a shape and/or colour other than the shape or colour that it really is.[269]

Consequently, the use of lighting to alter the overall appearance of scenes depicted in encased dioramas, including the colour of objects, would also be classified as a physical illusion. The use of light in the encased contemporary art diorama can create atmosphere and allude to times of day. The light, albeit electric, is real and so are the shadows it casts, and the tonal variations it gives rise too. The fact that the light is actual, rather than implied as it is in realistic paintings, adds to the authenticity of the scene and bolsters the effectiveness of the main overall illusion.

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[268] Fish, *Perception, Hallucination and Illusion,* 162.
[269] Ibid., 150.

The modelled forms and background surfaces within the encased contemporary art diorama are shaped and coloured in ways that emulate objects found in the life-sized world. They contribute to the formation of important though minor contributory illusions. Like the main overall illusion, their purpose is to induce the viewer into experiencing cognitive illusions. For example, when the painted modelled wood and cotton forms inside my diorama *Fantasia Ballroom* (Fig.31)*,* are momentarily perceived by the viewer as being actual chairs, then a minor contributory cognitive illusion is accomplished.

5.9 The Omission of Human Figures

In the early phases of my studio practice, in addition to collecting materials such as artificial botany and miniature furniture, I assembled miniature human figures, in the way of dolls. I had wondered why the use of human figurines or dolls was shunned in the encased contemporary art diorama. It soon became apparent to me. As soon as a doll or dolls were were tentatively placed in situ within a diorama, they immediately dominated the depicted scene. They became the visual centrepiece, the lead characters in a unknown narrative that seemed to demand explanation. Meanwhile, the built form of the dioramic scene was denigrated to the secondary role of a mere dollhouse-like stage set, and its finer details were disregarded.

Merleau-Ponty has remarked upon how in real life, the presence of other humans can displace and reorientate our perceptions of the immediate environment:

> No sooner has my gaze fallen upon a living body in process of acting than the objects surrounding it take on a fresh layer of significance: they are no longer simply what I myself could make of them, they are what this other pattern of behaviour is about to make of them[270]

I researched the matter further and found that static human figures were shunned across a range of fields related to illusionism. Wonders has remarked in relation to anthropological dioramas:

> No matter how realistic a human model may be, there is always an intuitive sense of its falseness, perhaps due to a deep biological recognition of likeness within a species, that prevents a real illusion from occurring in the mind of the viewer.[271]

The implausibility of static human figures in the formation of illusions is not a matter unique to the diorama, it also proves to be disruptive to the sustaining of illusions within animated

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[270] Merleau-Ponty, *Phenomenology of Perception, 353*
[271] Karen Wonders, *Habitat Dioramas: Illusions of Wilderness,* 17.

films and trompe l'oeil paintings. Furniss has remarked upon the phenomenon in relation to animated films:

> In real life living beings are never completely still because bodily functions such as breathing and heartbeats cause at least minute amounts of movement at all times. Seeing an animated figure that is completely still-that is, to see a single image that is photographed for more than, say, half a second- might strike the viewer as unrealistic.[272]

Trompe l'oeil expert Martin Battersby observes that attempting to realistically incorporate static human figures into trompe l'oeil paintings presents its own difficulties:

> The human figure offers the greatest challenge to the deceptive arts of trompe l'oeil - the capture of a breathing figure caught in a moment of stillness between movements and frozen in a momentary immobility.[273]

In his thesis, *Material Culture in Miniature: Historical Doll's Houses Reconsidered*, James Bryan notes in regard to dollhouses belonging to adult collectors, that "dolls often strike observers as incongruous ...and as such have frequently been purposely avoided."[274]

Rather than place human figures in my encased contemporary art dioramas, I resolved to do as others have done before. Rather than include human figures, I implied human habitation through signs of wear and tear, or the positioning of objects, such as the drinking glasses and handbags left on the bar in my diorama *Funky Fresh Discothèque* (Fig.40).

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[272] Maureen Furniss, *Art in Motion: Animation Aesthetics*, 79.

[273] Martin Battersby, Trompe l'oeil (London: academy editions, 1974), 75.

[274] James E. Bryan, *"Material Culture in Miniature: Historical Doll's Houses Reconsidered"* (PhD, University of Wisconsin-Madison, 2003),2.

Chapter Six

Conclusion

6.1 Conclusion

The formation and perception of illusions within the encased contemporary art diorama is dependent upon a symbiotic interaction involving the artist and the viewer. Through the strategic application of various forms of artifice, the artist sets up within the diorama a situation conducive to the perception of illusions. The viewer looks into the encased contemporary art diorama through a specified viewing portal, and potentially beholds illusions created by the artist.

The artist uses the diorama's opaque box-like encasement to conceal elements that they do not want the viewer to see such as wiring, mirrors or light bulbs. The viewing portal typically takes the form of a glass glazed window situated at the front of the diorama, but may also take the less common form of a peephole or a small unglazed opening. The viewing portal allows the viewer limited visual access to the diorama's interior, it also allows the artist to predetermine that which the viewer can and cannot see within the diorama from a limited range of external viewpoints.

The main overall illusion that the artist strives to create for the viewer, through the synergetic combination of minor contributory illusions, is the cognitive illusion that the scene depicted in miniature within the diorama is real. Consequently, the aesthetics of the encased contemporary art diorama is invariably one of realism, as it is always the objective of the artist to create convincing illusions of mimetic resemblance to real or imagined places derived from the actual life-sized world. The scene realistically depicted in miniature is silent and static, as if caught in a frozen moment of time.

The artifice used by the artist includes realistically coloured miniature three-dimensional forms designed to resemble the appearance and shapes of objects found in the actual life-sized world. Miniature modelled forms may be entirely created by the artist, or they may be ready-made. Uniformity of scale assists in bringing a harmonious sense of coherency to the depicted scene and contributes to the formation of mimetic illusions of resemblance. The contents of the diorama may be strategically illuminated by the artist to convey atmosphere and allude to times of day.

In dioramas depicting architectural interiors, the modelled and treated surfaces typically depict floors, walls, and ceilings, some of which may feature miniature scaled windows and doors. Architectural interiors usually feature scaled furniture and furnishings. Through-views into secondary spaces, such as rooms or rear gardens can create illusions of continuity of space that extend beyond the realm of the central scene. Strategically positioned mirrors may be used to create illusions of augmented space. Dioramic depictions of exterior scenes typically feature the replication of elements from the natural world, such as botany and the sky.

Modelled background imagery within the diorama serves to contextualise the arrangement of foreground objects and contributes to the fulfilment of the diorama's schema. However, in keeping with Gombrich's notion of the beholder's share, the viewer's perception of illusions may be either adversely or positively impacted by their familiarity with the schema of the depicted scene. The greater the correlation between the viewer's knowledge and expectations of the schema depicted by the artist, then the greater the potential for the viewer to perceive illusions of mimetic resemblance to actual life-sized places and situations.

The encased contemporary art diorama is typically a mixed medium artform. The artist strives to suppress the viewer's awareness of the actual mediums and materials used to create the modelled forms and background imagery within the diorama. This is because a perceived lack of correlation between the material qualities of the miniature models and their life-sized counterparts has the potential to impede the perception of illusions of mimetic resemblance.

The glazing in the viewing portal, or in some instances the small size of the viewing portal, prevents the viewer from making a tactile assessment of the diorama's contents, and consequently becoming overtly aware of the physical anomalies between the depicted objects and their life-sized counterpart. It also serves to suppress the viewer's awareness of the physical disproportion between the size of their body and the miniature scale of the dioramic scene.

The appearance of the surfaces within the diorama may be altered through the use of paints, and the strategic application of lighting, to allow them to bear closer mimetic resemblance to their life-sized counterparts. According to Fish, the illusionistic alteration of the appearance of colours and forms through the application of lighting is classified as a physical illusion. He states:

> The reason that there is an illusory appearance in the case of physical illusions, then, is purely a matter of what is going on in the world and how that affects the patterns of light that impinge upon the subject.[275]

Stressing, staining, scratching, or chipping the surfaces within the diorama can create patinas that convincingly allude to the passage of time or the corrosive effects of weathering. Worn patinas may also convey a sense of wear-and-tear arising as a consequence of human habitation.

The use of miniature human forms within the encased contemporary art diorama is shunned, because they tend to be unconvincing, and to distract the viewer in ways that denigrate the built components of the diorama to the secondary role of mere background imagery. Instead of placing human figures inside the diorama, the artist typically implies human presence through the placement of domestic objects, so that they appear as if having been recently used or momentarily abandoned. For example, in my diorama *Apartment of an Aspiring Musician* (Fig.30), the trumpet resting on the set of drawers, along with the sheet music laying on the bed, serve to indicate the interests of an implied, yet absent tenant.

I do not consider the illusion experienced by the viewer to be immersive in nature, instead it is more aptly described as an illusion of being suspended at the threshold of immersion, a non-veridical sensation of looking in at a scene that they can never actually physically enter. Part of the pleasure of looking at encased contemporary art dioramas is centred upon the way that the artist challenges the viewer's perceptual abilities, this combined with the miniature toylike scale of the modelled forms imbues the viewing experience with a characteristic sense of playfulness. I think of it as being like a perceptual game of 'tug of war' in which the artist's convincing conveyance of illusions is counteracted by the viewer's foothold on reality. Ultimately, the illusions fleetingly perceived within the encased contemporary art diorama only ever exist within the realm of the viewer's perception, so the artist never really knows just how successful their illusion forming artifice has been.

By making encased contemporary art dioramas and integrating screen-based animated films into them, I have arrived at an understanding of the ways in which such integration can enhance aspects of the illusionism within such dioramas. The actual life-sized world, which the encased contemporary art diorama emulates on a miniature scale, is not a silent static place trapped in a frozen moment of time. In actuality it is often full of flux and change,

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[275] Fish, *Perception, Hallucination and Illusion*, 148.

movement, noise and metamorphosis. Integrating screen-based animated films into encased contemporary art dioramas can imbue encased dioramas with such qualities, and in turn enhance their mimetic resemblance to the life-sized world.

Movement and metamorphosis are qualities associated with change over time, and as such can create a sense that the scene depicted within the encased diorama is occurring in real time, rather than in a frozen or suspended moment of time. The integration of screen-based animated film can thaw the frozen moments captured within encased contemporary art dioramas and imbue them with a more lifelike temporality.

Importantly, animated film can assist in further fulfilling the schema of the scene depicted within the diorama. Rather than depend solely on modelled forms to fulfil the schema, I found that I could elaborate upon the schema through the use of integrated screen-based animated film. For example, in my diorama *The Lake* (Fig.45) I had green plastic modelled forms to depict water reeds, a horizontal sheet of glass to emulate the water surface, and a small wooden structure to represent a boathouse. The addition of screen-based hybrid animated film allowed me to build on the schema by introducing the moving image of a waterfowl and a boat. The liquidous movement of the water and the accompanying sound of it lapping at the shore assisted in fulfilling the schema of a lake in ways that could not be achieved by using static silent imagery alone.

My initial observation was that while integrated screen-based animated film could bring perceived illusions of movement to the interior of the encased diorama, such movements were restricted to the screen area. So, it was an unexpected surprise to then find that integrated screen-based animated film had the potential to make the diorama's interior appear to shift its position in relation to the integrated animated background imagery. For example, in my diorama *Spaceship to Earth* (Fig.42) the animated imagery seen through the spaceship's front window creates an illusion that the spaceship is advancing forward through space, as in outer space.

Similarly, fleeting glimpses of light seen between the elevator doors in my diorama *The Elevator* (Fig.43), created an illusionistic impression that the elevator was going up or down. As the elevator doors were in fact composed of integrated screen-based animated film, I was also able to make them appear to open and close to reveal different floors in an imaginary

building, this in turn further enhanced the illusion that the interior of the diorama was travelling up and down.

I found that if the integrated screen-based animation was to enhance the illusionism within an encased diorama it had to have a realistic aesthetic that was continuous with the foreground imagery. Unlike my stand-alone animated films such as *Luna Lullaby,* there could not be rapid edit cuts from one scene to another, or from one viewpoint to another as this would make the viewer overly aware of the filmic medium and potentially interfere with their perception of illusions of mimetic resemblance.

Integrated screen-based animated film can definitely enhance illusionism within encased contemporary art dioramas and therefore expands on the repertoire of illusionistic artifice available to the artist. However, like other illusion forming artifice, such as strategically positioned mirrors or through-views into secondary spaces, it may not be suitable for all encased dioramas. Integrated screen-based animated film is not something that can be added as an afterthought, its inclusion needs to be pondered at the earliest developmental stage of the encased contemporary art diorama. Its presence gives the viewer more to look at and more to contemplate, as they stand suspended on the threshold of immersion. It boosts the entertainment factor, and by keeping the viewer engaged for a longer period of time, it provides additional moments for the viewer to suspend their disbelief.

The encased contemporary art diorama is a miniature artform with a big future. Especially if future contemporary artists can expand upon its expressive capacities and break free from its rigid adherence to realism and explore artistic themes more aligned to abstraction, just as the modernist animators did. I envision that this will happen one day, and that when it does, integrated screen-based animated film will enrich and enhance the amazing illusionism beheld within such dioramas.

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